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## LIST

OF THE

# SPECIMENS

OF

# HOMOPTEROUS INSECTS

1N

THE COLLECTION

OF THE

BRITISH MUSEUM.

PART IV.

PRINTED BY ORDER OF THE TRUSTEES.
LONDON, 1852.

LONDON:
PRINTED BY EDWARD NEWMAN,
9, DEVONSHIRE ST., BISHOPSGATE.

#### INTRODUCTION.

The principal object of the present Catalogue has been to give a complete list of the specimens of Homopterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variation of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained in the collection are indicated by the letters a. b, c, &c., following the name of the species and its synonymes, and the description, if it appeared to have been before undescribed.

This part of the Catalogue of Homopterous Insects has been prepared and the new species described by Mr. Francis Walker, so well known for his attention to this order of Insects.

JOHN EDWARD GRAY.

British Museum, Dec. 30th, 1851,



#### LIST

OF

# HOMOPTEROUS INSECTS.

#### Order I. CICADINA.

#### Fam. V. CICADELLINA.

Ranatræ, Germ. Mag. Ent. iv. 1. Cicadellæ, St. Farg. et Serv. Enc. Méth. x. 602. Cicadellina, Burm. Handb. Ent. ii. 103, 5. Planidorsi, Amyot et Serv. Hist. Nat. Hém. 553.

#### Tribe 1. LÆVIPEDES.

Lævipedes, Amyot et Serv. Hist. Nat. Hém. 553.

Sub-tribe 1. CEPHALELIDES.

Cephalelides, Amyot et Serv. Hist. Nat. Hém. 554, 1.

# Vo Genus 1. CEPHALELUS.

Cephalelus, Percheron, Guér. Mag. Zool. ii. 9. Burm. Gen. Rhynch. Tribe 4, Fam. 5.

Dorydium, Burm. Handb. Ent. ii. 1, 106.

PART III.

# 1. CEPHALELUS INFUMATUS.

ephalelus infumatus, Percheron, Guér. Mag. Zool. ii. 9, pl. 48. Burm. Gen. Rhynch. Tribe 4, Fam. 5. orydium paradoxum, Burm. Handb. Ent. ii. 1, 106, 1. Africa.

# 2. CEPHALELUS PERCHERONI.

ephalelus Percheroni, Guér. Mag. Zool. Hém.

# √d 3. Cephalelus marginatus.

ephalelus marginatus, Waterhouse, Trans. Ent. Soc. ii. 195. King George's Sound.

# √O 4. CEPHALELUS BRUNNEUS.

Cephalelus brunneus, Waterhouse, Trans. Ent. Soc. ii. 195. a. Sydney, King George's Sound. Presented by C. Darwin, Esq.

## Genus 2. DORYDIUM.

Dorydium, Burm. Gen. Rhynch. Tribe 4, Fam. 5. Amyot et Serv. Hist. Nat. Hém.

## 1. Dorydium lanceolatum.

Dorydium lanceolatum, Burm. Gen. Rhynch. Tribe 4, Fam. 5. Dorydium, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 201, 436. Sicily.

#### Sub-tribe 2. EURYMELIDES.

Eurymelides, Amyot et Serv. Hist. Nat. Hém. 554, 2. Cercopides, p., St. Farg. et Serv. Enc. Méth. x. 602. Ulopides, p., St. Farg. et Serv. Enc. Méth. x. 602.

#### O Genus 1. EURYMELA.

Eurymela, Hoff. St. Farg. et Serv. Enc. Méth. 603. Burm. Blanch. Amyot et Serv.

# 1. EURYMELA FENESTRATA.

Eurymela fenestrata, St. Farg. et Serv. Enc. Méth. Ent. x. 604.

Burm. Ent. ii. 1, 108, 1. Gen. Rhynch. Tribe 4, Fam. 5, 2, fig.

1. Blanch. Hist. Nat. Ins. iii. 199. Hém. pl. 15, f. 5. Amyot et Serv. Hist. Nat.

a. New Holland. Presented by the Earl of Derby.

b, c. New Holland. Presented by the Entomological Club.

d. New Holland. From Mr. Shuckard's collection.

e-l. New Holland.

## 2. EURYMELA RUBROVITTATA.

Eurymela rubrovittata, Amyot et Serv. Nat. Hist. Hém. 555, 2.

a. Swan River. Presented by Sir J. Richardson.

b. Moreton Bay. From Capt. Parry's collection.

c. New Holland. From Capt. Parry's collection.

d-f. New Holland. From Mr. Argent's collection.

# 3. EURYMELA RUFICOLLIS.

✓ Eurymela ruficollis, Burm. Gen. Rhynch. Tribe 4, Fam. 5, 3. a—c. New Holland.

## 4. EURYMELA ERYTHROCNEMIS.

Eurymela erythrocnemis, Burm. Gen. Rhynch. Tribe 4, Fam. 5, 4. Amyot et Serv. Hist. Nat. Hém. 556, 3, pl. 10, f. 5.

a. New Holland. Presented by the Entomological Club.

b. New Holland. From Capt. Parry's collection.

c, d. New Holland.

# 05. Eurymela latifascia.

Nigra, rufo varia, fronte fulvo bivittato, femoribus basi rufis, metatarsis\* posticis subtus fulvis, alis anticis rufo bifasciatis et ad costam vittatis, alis posticis nigro-fuscis basi rufis.

Black: epistoma red, with two large black spots on each side in front; front with conical furrows, adorned on each side with a slender, short, oblique, tawny stripe; vertex red along the middle of the

<sup>\*</sup> Metatarsus or basal joint of the tarsus.

hind border: disk of the fore-chest with a short, conical, red stripe, which rests on a red band: hind-chest red: abdomen tinged with lead-colour: legs black; thighs towards the base and hips red; hind metatarsi tawny beneath: fore-wings black, with two very broad red bands, which are connected along the fore border; the first connected with the base by a stripe along the fore border: hind-wings blackish brown, paler towards the base, which is red. Length of the body 5 lines; of the wings 13 lines.

a. King George's Sound, New Holland. Presented by Captain Gray.

# 6. Eurymela basalis.

Lutea cyaneo varia, capite antico nigro vittato, abdominis apice nigro, pedibus nigris, femoribus basi luteis, alis anticis cyaneis basi fulvis cyaneoque maculatis, alis posticis purpureofuscis basi limpidis.

Luteous: head with a short, black stripe in front: proboscis tawny, with a brown tip; front of the fore-chest with a broad, dark blue band, which is dilated on each side of the hind border: scutellum dark blue: tip of the abdomen black: legs black; thighs towards the base and hips luteous: fore-wings blue, tawny for more than one-third from the base, which has a blue spot on each side: hind-wings purplish brown, colourless towards the base. Length of the body 5 lines; of the wings 13 lines.

a. New Holland. From Mr. Argent's collection.

# 7. Eurymela suffusa.

Ferruginea, capite nigro bimaculato, thorace nigro trimaculato, abdomine rufo apice nigro, pedibus nigris, femoribus fulvis apice nigris, tibiis posticis basi ferrugineis, alis anticis nigricantibus ferrugineo cinctis et ad discum maculatis, alis posticis fuscis.

Ferruginous: head with a pair of black spots on each side between the eyes, yellow, with a ferruginous stripe in front: mouth tawny, with a black tip; scutellum with three triangular black spots along the fore border: abdomen red, with a black tip, and with a black spot at the base of the oviduct: legs black; hips and thighs tawny; tips of the latter black; hind shanks ferruginous towards the base: fore-wings blackish, with a tawny margin, which is widened on the fore border near the base, and on the hind border in

the middle; an irregular ferruginous spot in the disk; under side tinged with blue: hind-wings dark brown. Length of the body 5 lines; of the wings 12 lines.

a. New South Wales. Presented by James Wilson, Esq.

# 0 8. EURYMELA SPECULUM.

Nigro-ænea, capite antico flavo-bivittato, metathorace abdomineque rufis, hujus apice pedibusque nigris, femoribus basi rufis, femoribus posticis rufis apice nigris, metatarsis posticis fulvis apice nigris, alis anticis albo-bimaculatis.

This species may have been described as E. fenestrata, from along each side in front: mouth yellow, with a black tip: hindchest and abdomen bright red; tip of the latter black: legs black; thighs towards the base and hips red; bind thighs red, with black tips; hind metatarsi tawny, with black tips: fore-wings with two white spots; the first very large, formed of two united spots, and extending nearly across the wing; the second large, almost round near the tip of the fore border. Length of the body 5-7 lines; of the wings 13-14 lines.

In E. fenestrata the hind-chest, abdomen, and the fore-wings

along the fore border, are tawny.

a. New Holland. Presented by the Haslar Hospital. b, c. New Holland. Presented by Lieut. Smith.

d, e. New Holland. Presented by J. G. Children, Esq.

f. Van Diemeu's Land. Presented by the Rev. Augustus Beaufort.

g. Van Diemen's Land. Presented by R. Butler, Esq. h. Van Diemen's Land. From Dr. Hooker's collection.

i. Moreton Bay. From Capt. Parry's collection.

j. New Holland. From Mr. Gould's collection.
 k. New Holland. From Mr. Argent's collection.

l. New Holland.

# 9. Eurymela discifera.

Nigra luteo varia, metathorace piceo, abdomine vittis duabus ventreque flavis, femoribus flavis apice nigris, metatarsis posticis albis apice nigris, alis anticis nigro-æneis albo bifasciatis, alis posticis nigro-cyaneis vel nigro-purpureis.

Head luteous, yellow in front, with a large black spot on each side between the eyes; these spots are quadrate at the base, obliquely truncate on the inner side of the fore part, connected by a slender, black band, from whence an interrupted black stripe proceeds to the mouth: fore-chest black, with a large luteous spot on each side in front; hind border dingy white: scutcheon luteous; disk black: hind-chest pitchy: abdomen black, with a broad, short, yellow stripe along each side; under side yellow, with a black tip: legs black; hips and thighs yellow; tips of the latter black; hind metatarsi white, with black tips: fore-wings brassy-black, with two white bands; first band beyond one-third of the length of the wing, shortened, more or less interrupted, emitting a more or less distinct stripe towards the base; second band near the tip, slightly curved inward, broadest on the fore border: hind-wings bluish or purplish black. Length of the body 4 lines; of the wings 9 lines.

a. Moreton Bay. From Capt. Parry's collection.b. New Holland.

# 10. EURYMELA TERMINALIS.

Ferruginea, capite flavo bimaculato, scutello piceo, abdomine rufo apice nigro, pedibus nigris, femoribus fulvis, alis anticis fuscis albo bifasciatis.

Ferruginous: head yellow on each side in front, adorned between the eyes with an irregular black band, from whence a black stripe proceeds to the mouth: scutcheou piceous, ferruginous at the tip and along the border on each side: abdomen red, with a black tip: legs black; hips and thighs tawny; tips of the latter black: fore-wings brown, with two white bands; first band at one-third of the length of the wing, slightly oblique, emitting three tawny stripes to the base, the middle one, in some cases, very broad; second band beyond two-thirds of the length of the wing, broadest on the fore border; hind borders tawny: hind-wings bluish brown. Length of the body 4 lines; of the wings 10 lines.

U Var. β. No black band between the eyes.

a-d. Adelaide. Presented by the Entomological Club.

## O 11. EURYMELA LIVIDA.

Nigra fulvo varia, abdominis apice ventreque rufis, tibiis posticis basi femoribusque rufis, metatarsis posticis basi albis, alis anticis fuscis apice albo fasciatis.

Head tawny, with a large, irregular, black spot on each side between the eyes; between the fore part of these spots a black

stripe extends to the mouth, and has some small black spots on each side of it: fore-chest black, with a tawny border, and with three short tawny stripes, of which the side pair are slightly oblique: scutcheon black, with a tawny border: abdomen black, red towards the base and beneath; legs black; thighs pale red; tips of anterior thighs black; hind-shanks pale red at the base; hind metatarsi white towards the base: fore-wings brown, tawny on the disk towards the base, which is black; a white band near the tip widens towards the fore border: hind-wings blackish. Length of the body  $3\frac{3}{4}$  lines; of the wings 9 lines.

a. Port Stephen, New Holland. Presented by the Earl of Derby.

#### 12. EURYMELA SEMIFASCIA.

Nigro-anea, pectore rufo, abdomine pedibusque nigris, femoribus basi rufis, metatarsis posticis basi albis, alis anticis rufo cinctis albo bifasciatis.

Brassy-black: mouth tawny, with a black tip: breast mostly red: abdomen black: oviduct red: legs black; thighs towards the base and hips red; hind metatarsi white towards the base: forewings bordered with red, having two slender, imperfect, whitish bands; one near the base, the other near the tip: hind-wings blackish. Length of the body  $3\frac{1}{2}$  lines; of the wings  $7\frac{1}{2}$  lines.

a. New Holland. Presented by the Entomological Club.b. Van Diemen's Land. From Dr. Hooker's collection.

# 13. EURYMELA DECISA.

Nigro-ænea, rufo vittata, abdomine rufo apice nigro, pedibus nigris, tibiis posticis basi femoribusque rufis, metatarsis posticis basi albis, ulis anticis albo interruptè fasciatis.

Brassy-black: head with a red stripe, which is forked in front of the crown; four tawny stripes on the face; border whitish: forechest with a red stripe; border whitish; scutellum reddish along the hind border: abdomen bright red, black towards the tip: legs black; thighs bright red; tips of anterior thighs black; hind-shanks red at the base; hind metatarsi white towards the base: fore-wings with an interrupted white band near each tip: hind-wings blackish. Length of the body 4 lines; of the wings 10 lines.

a. Moreton Bay. From Capt. Parry's collection.

# 14. EURYMELA VARIA.

Nigra albo varia, scutello rufo bimaculato, abdomine albo apice nigro, metatarsis posticis femoribusque albis, alis anticis albo bifasciatis et guttatis.

Black: head bordered with white, having on the front two white stripes, which are connected with two large white spots on the epistoma: a white stripe on the fore-chest, which is white along the hind border: scutcheon white on each side, with two reddish spots in the disk: abdomen white, with a black tip: legs black; hips and thighs white; tips of the latter black; knees white; hind metatarsi white, with black tips; fore-wings with two white bands; the first imperfect at one-third from the base; the second beyond two-thirds from the base; two white dots on the hind border between the bands: hind-wings blackish.

<sup>δ</sup> Var. β. Head without a white stripe on the front; the white spots on the epistoma diminished to two white stripes on each side: scutellum black, dingy white along each side towards the tip: disk of the back of the abdomen black: white of the legs dingy: forewings with irregular bands, which are accompanied by several white dots. Length of the body 3—3½ lines; of the wings 7—8 lines.

a. Hobart Town. Presented by the Earl of Derby.

b, c. New Holland. Presented by the Entomological Club.

d. Swan River. From Mr. Turner's collection.

e-i. New Holland.

## O 15. EURYMELA BICINCTA.

Eurymela bicineta? Erichson, Archiv. 1842, i. 285.

Nigro-ænea, albo varia, metatarsis posticis femoribusque albis, alis anticis albo bifasciatis et uniguttatis.

Brassy-black: head bordered with white: abdomen black, white towards the base beneath: legs black; thighs and hind metatarsi white, with black tips: fore-wings with two slender white bands; the first very slanting; the second erect; a white dot on the hind border between the bands; hind-wings gray.

Var.  $\beta$ . Epistoma with a large white spot on each side: forechest and scutellum bordered with white: abdomen dingy-white, with a black tip. Length of the body 2—3 lines; of the wings 6—8 lines.

a. Van Diemen's Land. Presented by the Rev. T. Ewing.

b, c. Van Diemen's Land. Presented by the Rev. T. Augustus Beaufort.

d,e. Van Diemen's Land. Presented by the Entomological Club. f—h. Van Diemen's Land. From Dr. Hooker's collection.

i. Van Diemen's Land. From Mr. Argent's collection.

# 16. EURYMELA ATRA.

Nigro-ænea, abdomine nigro lato, pedibus piceis, femoribus basi rufis.

Brassy-black: mouth red: abdomen black, rather broad: legs pitchy; thighs towards the base and hips red: hind-wings gray, blackish brown along the hind borders. Length of the body  $2\frac{3}{4}$ — $3\frac{1}{4}$  lines; of the wings 6—8 lines.

a, b. Van Diemen's Land. From Dr. Hooker's collection. c, d. Van Diemen's Land. From Mr. Shuckard's collection.

# 17. EURYMELA MARMORATA.

Eurymela marmorata, Germar, Burm. Gen. Rhynch. Tribe 4, Fam. 5, 5.

a. Van Diemen's Land.

V EURYMELA - ? (Pupa).

a. New Holland. From Mr. Argent's collection.

EURYMELA - ? (Pupa).

a. Adelaide. Presented by the Entomological Club.

# Genus 2. UROPHORA.

Urophora, G. R. Gray, Griff. Ed. Anim. Kingd. Hém. 261.

## 1. UROPHORA HARDWICKII.

Urophora Hardwickii, G. R. Gray, Griff. Ed. Anim. Kingd. Hém. 261, pl. 90, f. 3.

a-c. Nepaul.

#### Genus 3. ÆTHALION.

Æthalion, Latr. Cons. Gén. 263. St. Farg. et Serv. Guér. Blanch. Amyot et Serv. Crochard.

Cicada, p., Linn. Deg. Tign.

O Tettigonia, p., Fabr. Dystra, p., Fabr.

¿ Æthalia, Germar, Burm.

#### 1. ÆTHALION RETICULATUM.

Æthalion reticulatum, Latr. St. Farg. et Serv. Enc. Méth. x. 765, 1. Blanch. Hist. Nat. Ins. iii. 199, 1. Hém. pl. 15, f. 4. Guér. Icon. Règ. Anim. Ins. pl. 5, 9, f. 6. Amyot et Serv. Hist. Nat. Hém. 557, 1. Crochard, Ed. Règ. Anim. pl. 98, f. 6.

Cicada reticulata, Linn. Syst. Nat. ii. 707, 18. Stoll, Cic. pl. 14, f.
 74. Deg. Ins. iii. 227, 24, pl. 33, f. 15, 16. Tign. Hist. Nat.

Ins. iv. 144.

Tettigonia reticulata, Fab. Syst. Rhyn. 41, 42. Tettigonia minuta, Fab. Ent. Syst. iv. 26, 37.

O Lystra reticulata, Fab. Syst. Rhyn. 60, 16.

Æthalia reticulata, Germ. Mag. Ent. iv. 95, 1. Burm. Handb. Ent. ii. 1, 108, 1.

Ætalion reticulatum, Humboldt, Recueil, 378, pl. 23, f. 12, 13.

a. Brazil. Presented by John Miers, Esq.
b. Columbia. From Mr. Turner's collection.
c—q. Brazil.

## 2. ÆTHALION PUNCTATUM.

Testaceum nigro varium, abdomine supra nigro fasciis apiceque viridibus, pedibus nigro fasciatis, alis anticis albidis basi fulvis nigro-punctatis.

Testaceous: head notched on the middle of the crown, concave, and with two black bands in front: tip of the mouth black: forechest dotted with large black punctures; two short black stripes on each side in front: scutcheon with a black stripe, which is forked towards the tip: abdomen black above, green towards the tip and on the hind-borders of the segments: legs adorned with irregular black bands or spots, clothed with short pale hairs: fore-wings

whitish, tawny, with black punctures at the base; veins green or tawny, more or less marked with black, marginal areolets numerous, irregular in number and form: hind-wings white; veins black. Length of the body  $6\frac{1}{2}$  lines; of the wings 14 lines.

a, b. Columbia. From Mr. Turner's collection.

# 3. ÆTHALION PULCHRUM.

Æthalion pulchrum, White, MSS.

Testaceum nigro varium, pedibus rufo-vittatis, alis anticis albidis, rufo maculatis, basi nigro variis.

Testaceous: head notched in the middle of the crown, concave and with two black bands in front: tip of the mouth black: forechest dotted with large black punctures; two short black stripes on each side in front: scutcheon black at the base and with a black stripe which is forked towards the tip: abdomen with black punctures, blackish towards the base: legs streaked and spotted with black, clothed with short white hairs, fore-wings whitish, testaceous with black punctures at the base, slightly streaked with black near the base and along the hind border, with a gray spot in the disk; veins white, black towards the tips and along the fore border; disks of the areolets red: hind-wings white; veins black. Length of the body 5 lines; of the wings 12 lines.

a. Columbia. From M. Jurgens' collection.

# 4. ETHALION BASALE.

Testaceum nigro varium, thoracis disco abdominisque segmentorum marginibus posticis rufis, alis anticis luridis albido fasciatis basi rufis nigroque vittatis.

Testaceous: head slightly concave on the crown and in front, where there are four black dots in two lines: tip of the mouth black: chest very minutely punctured; disk red with the exception of a middle stripe; shield with two short oblique black stripes in front; scutcheon with a black stripe along the furrow on each side: hind-chest black: abdomen punctured; hind borders of the segments red: legs not hairy; thighs streaked with black; shanks and feet with black bands: fore-wings lurid, whitish towards the base, where they are red with a black stripe; veins red for near half the length from the base, tawny and bordered with brown from thence to the tips: hind-wings pale lurid; veins darker, partly black.

Var.  $\beta$ . Head with four black spots along the crown, and with a short black band which incloses the eyelets; two black spots on the face: scutcheon black at the base: abdomen yellow. Length of the body  $5-5\frac{1}{2}$  lines; of the wings 12 lines.

a, b. Columbia. From Mr. Turner's collection.

# 5. ETHALION APICALE.

Flavum nigro et ferrugineo varium, abdomine luteo nigro-varium, pedibus luteis nigro variis, alis anticis ferrugineis nigro semicinctis.

Yellow: head with three black bands; the fore one short, half-elliptical; a black spot on the face and a black band on the epistoma: tip of the mouth black: chest black, minutely and thickly punctured, with a white border, and with a slight white dorsal keel which has a broad ferruginous stripe on each side; scutcheon with a luteous stripe which is forked towards the fore border: abdomen luteous, marked with black at the base and at the tip, and with a black dorsal stripe: legs luteous with black bands; anterior femora with black stripes; hind femora black, with luteous tips: fore-wings ferruginous, black along the hind borders and at the tips, and with a black stripe in the disk near the base; veins whitish: hind-wings gray, blackish-brown at the base; veins black. Length of the body 5 lines; of the wings 11 lines.

a. - ? From Mr. Shuckard's collection.

# 6. ETHALION FISSUM.

Testaceum, nigro varium, abdomine ferrugineo, pedibus luteis nigro maculatis, alis anticis luridis basi testaceis.

Testaceous: head with four black spots in a line on the crown deeply notched on the fore border; front with two black spots adjoining the crown, and with a black band across the eyelets; a black spot on the face and two black spots on the epistoma: tip of the mouth black: chest thickly and very minutely punctured; shield with two short black stripes on each side in front, and with a slight dorsal keel; scutcheon mostly black at the base and on each side, reddish at the tip: abdomen ferruginous: legs luteous, adorned with black spots and bands; fore-wings pale lurid, testaceous and punctured at the base; veins yellow, much varied with black: hind-wings gray; veins black, pale towards the base. Length of the body 4 lines; of the wings 8 lines.

Var. β. Fore-wings colourless.

a, b. Columbia. From Mr. Turner's collection.

c. Columbia. From M. Jurgens' collection.

# 7. ÆTHALION BIVITTATUM.

Testaceum nigro varium, abdomen luteum, femora nigro vittata, tibiæ tarsique nigro fasciata, alæ anticæ luridæ apice nigricantes.

Testaceous: head with two black bands in front: tip of the mouth black: chest thickly and very minutely punctured; shield with two short black stripes on each side in front, and with two parallel pale ferruginous stripes in the disk; two short black stripes on the scutcheon: abdomen luteous: thighs streaked with black; shanks and feet with black bands: fore-wings pale lurid, blackish along the tips; veins white: hind-wings slightly gray; veins yellow. Length of the body  $2\frac{1}{2}$ —4 lines; of the wings 6—8 lines.

OVar. B. Abdomen testaceous: tips of the fore-wings not blackish.

- a. Venezuela. From Mr. Dyson's collection.b. Venezuela. From Mr. Stevens' collection.
- c. Columbia. From Mr. Pamplin's collection.

# 8. ETHALION LATIPES.

Ferrugineum, thoracis discus, abdomen femoraque testacea, tibia latæ compressæ nigro variæ, alæ sub-limpidæ basi testaceæ.

Pale ferruginous, clothed with gilded down: head impressed on the fore border, yellow beneath: mouth yellow, with a piceous tip: chest beset with tubercles; middle ridge slight; disk of the shield mostly testaceous: abdomen testaceous; thighs testaceous; tibiæ widened, compressed, marked with black: fore-wings almost colourless, testaceous towards the base; veins testaceous: hindwings colourless; veins black. Length of the body 4 lines; of the wings 10 lines.

This species recedes very much from the type in structure, and may be considered as forming a new genus.

a. Columbia. From Mr. Jurgens' collection.

ÆTHALION ----? (Pupa).

a. Columbia. From Mr. Turner's collection.

#### ÆTHALION -----? (Pupa).

a. Columbia. From Mr. Turner's collection.

# Sub-tribe 3. ULOPIDES.

Ulopides, Amyot et Serv. Hist. Nat. Hém. 557, 3. Ulopides, p., St. Farg. et Serv. Enc. Méth. x. 602.

# J Genus 1. ULOPA.

Ulopa, Fallen. Germ. Burm. St. Farg. et Serv. Amyot et Serv. / Cercopis, p., Germ.

## / . ULOPA OBTECTA.

Ulopa obtecta, Fall. Mon. Cic. Suec. Germ. Mag. Ent. iv. 55, 1.

Burm. Handb. Ent. ii. 1, 106, 1. Amyot et Serv. Hist. Nat.

Hém. 558. Crochard, Ed. Règ. An. pl. 99, f. 2.

/ Cercopis Ericæ, Germ. Faun. Ins. iii. pl. 24.

Ulopa ericetorum, St. Farg. et Serv. Enc. Méth. x. 765, 1. Ulopa, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 195, 429.

a. England. Presented by F. Walker, Esq.

b-e. England.

f-l. South of France.

m. Sweden.

# 6 2. ULOPA TRIVIA.

Ulopa trivia, Germ. Mag. Ent. iv. 56, 4. Fairm. Ins. iv. pl. 21. Epitænia? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 195, 430.

a. South of France.

## √0 3. Ulopa grisea.

Ulopa grisea, MSS., B. M. Testacea, pedibus fulvis.

Testaceous: legs tawny. Length of the body 1 line; of the wings  $2\frac{1}{2}$  lines.

a. South of France.

4. Ulopa decussata.

Ulopa decussata, Germ. Mag. Ent. iv. 55, 2. Germany.

15. ULOPA LUGENS.

Ulopa lugens, Germ. Mag. Ent. iv. 56, 3. Germany.

#### Sub<sub>7</sub>tribe 4. CERCOPIDES.

Cercopides, Amyot et Serv. Hist. Nat. Hém. 558, 4. Cercopides, p., St. Farg. et Serv. Enc. Méth. x. 602.

#### © Genus 1. CERCOPIS.

#### O1. CERCOPIS TRICOLOR.

Cercopis tricolor, St. Furg. et Serv. Enc. Méth. x. 604, 6, 1. Burm. Handb. Ent. ii. 1, 124, 1.

a. Java.

b. Java.

# O 2. CERCOPIS COSTALIS.

Ferruginea vel testacea, pectus venterque nigra, femora picea, alæ anticæ nigræ basi et ad costam ferrugineæ apice luridæ.

Ferruginous: mouth piceous: scutellum black, furrowed across: breast black: abdomen dark testaceous, black beneath, excepting the middle: legs ferruginous; thighs piceous: fore-wings black, ferruginous at the base and along the fore border; tips lurid: hind-wings dark brown, lurid at the base. Length of the body 10 lines; of the wings 22 lines.

O Var. β. Head and chest testaceous.

a, b. Philippine Islands. From Mr. Cuming's collection.

## 6 3. CERCOPIS PROSERPINA.

Cercopis Proserpina, White, Ann. Nat. Hist. xv. 35. a. Philippine Islands. From Mr. Cuming's collection.

#### 64. CERCOPIS THEORA.

Cercopis Theora, White, Ann. Nat. Hist. xv. 35.

a, b. Philippine Islands. From Mr. Cuming's collection.

c. Corea. Presented by Capt. Sir E. Belcher.

#### O 5. CERCOPIS CHARON.

Cercopis Charon, White, Ann. Nat. Hist. xv. 35. a, b. Philippine Islands. From Mr. Cuming's collection.

## 6. CERCOPIS PERSPICILLARIS.

Cercopis perspicillaris, White, Ann. Nat. Hist. xv. 35. a, b. Philippine Islands. From Mr. Cuming's collection.

#### 7. CERCOPIS XANTHOMELÆNA.

Cercopis xanthomelæna, White, Ann. Nat. Hist. xv. 35. C. spectabilis, Var.?

a, b. Philippine Islands. From Mr. Cuming's collection.

## O 8. CERCOPIS SPECTABILIS.

Cercopis spectabilis, Burm. Nov. Act. Phys. Med. Nat. Cur. xvi. Suppl. 304, pl. 41, f. 8.

Manilla.

#### 9. CERCOPIS MACTANS.

Cercopis mactans, White, Ann. Nat. Hist. xv. 36.

a, b. Philippine Islands. From Mr. Cuming's collection.

## To 10. CERCOPIS PLANA.

Nigra, caput et thorax rufa, alæ anticæ ad costam rufæ, basi nonnunquam plus minusve ferrugineæ.

Black: head and chest red: mouth red, with a black tip: fore-wings red along the fore border: hind-wings dark gray. Length of the body 5—6 lines; of the wings 13—14 lines.

Var. β. Fore-wings ferruginous for one-third from the base.

Var. γ. Fore-wings ferruginous for one-half from the base.

Var. δ. Fore-wings ferruginous for two-thirds from the base.

a. Java. Presented by the Entomological Club.

b, c. Java. Presented by J. G. Children, Esq.

d, e. Java. From the East India Company's collection.

f—h. Java. From Mr. Melly's collection.

i—l. Java. From Mr. Argent's collection.

#### 0 11. CERCOPIS NIGRIPENNIS.

Cercopis nigripennis, Fabr. Syst. Rhyn. 90, 8.

a—d. China. Presented by G. T. Lay, Esq.
e. Java. From Mr. Argent's collection.
f. North India. From Mr. Warwick's collection.
g. Silhet. From Mr. Sowerby's collection.
h. ——?

## D 12. CERCOPIS FUSCIPENNIS.

Cercopis fuscipennis, St. Farg. et Serv. Enc. Méth. x. 605, 6. Java.

#### 7 13. CERCOPIS URVILLEI.

Cercopis Urvillei, St. Farg. et Serv. Enc. Méth. x. 605, 3. Guér. Icon. Règ. An. Ins. pl. 59, f. 8. Texte, 368.

Offak.

#### 5 14. CERCOPIS BIVITTATA.

Cercopis bivittata, St. Farg. et Serv. Enc. Méth. x. 605, 4. Java.

## 15. CERCOPIS GUTTATA.

Cercopis guttata, St. Farg. et Serv. Enc. Méth. x. 605, 7. Java.

#### 0 16. CERCOPIS FLAVIFASCIA.

Nigra, nitens; alæ anticæ virides, flavo-albo bifasciatæ.

Black, shining: oviduct piceous: fore-wings metallic green, with two yellowish white bands; one before one-third of the length of the wing, broader than the second, which is before two-thirds of the length. Length of the body 7 lines; of the wings 19 lines.

a. Java. From Mr. Argent's collection.

#### O 17. CERCOPIS HEROS.

Cercopis heros, Fabr. Syst. Rhyn. 89, 3. a, b. China. Presented by G. T. Lay, Esq. c, d. Hong Kong. Presented by J. Bowring, Esq.

#### O 18. CERCOPIS ABDOMINALIS.

Cercopis abdominalis, MSS., B. M. Nigra, nitens; scutellum abdomen et pedes rufa; tibiæ anteriores tarsique nigra, alæ anticæ rufo fasciatæ, basi rufæ.

Nearly allied to C. heros, but distinguished by the greater breadth and brighter colour of the bands of the fore-wings, and by the darker colour of the hind-wings, and the greater proportion of red in them. Black, shining: mouth, scutcheon, abdomen, and legs red: feet, anterior shanks and tips of hind-shanks black: forewings red for one-fourth of the length from the base, with a broad, slightly undulating red band at two-thirds of the length: hind-wings gray, red at the base and along part of the fore border. Length of the body  $5\frac{1}{2}-6$  lines; of the wings 14-15 lines.

a—e. China. Presented by G. T. Lay, Esq. f. ——?

#### O 19. CERCOPIS VIRIDANS.

Cercopis viridans, Guér. Voy. Belanger, Ind. Orient. Java.

## 20. CERCOPIS LATISSIMA.

Nigra, nitens, lata; pedes abdominisque apex rufa, alæ anticæ virides basi dilatatæ.

Black, shining: shield very broad: mouth, legs and tips of the abdomen red: fore-wings metallic green, convex along the fore border, which is much dilated towards the base: hind-wings brown; veins black. Length of the body 7 lines; of the wings 22 lines.

a. Java. From Mr. Argent's collection.

# 21. CERCOPIS SIGNIFERA.

Flava; caput fusco cinctum; scutellum nigro bivittatum; abdomen purpureum, basi et subtus flavum; femora fusco vittata; alæ anticæ fuscæ, basi flavæ fusco maculatæ, apice rufo ocellatæ.

Yellow: head encircled with a broad brown band; a brown spot on the epistoma: mouth tawny, with a black tip: shield with two very broad black stripes, which are angular on the outer sides, and occupy there the whole breadth on the hind part, but are contracted in front: abdomen purple; tip and under side yellow, the former partly ferruginous: legs yellow, partly tawny; thighs streaked with brown; tips of the shanks and of the tarsi brown: fore-wings brown, yellow, with three large brown spots towards the base, with three red semicircles in the disk towards the tip, which is bordered with red; two of the semicircles united: hind-wings pale brown; veins brown. Length of the body 7 lines; of the wings 20 lines.

a. - ? Presented by J. G. Children, Esq.

b. Silhet. From Mr. Argent's collection.

#### 22. CERCOPIS DUCENS.

Nigra, nitens, lata; abdomen purpureum; pedes picei; alæ anticæ nigro-fuscæ, fasciis duabus angustis undatis rufis ornatæ.

Black, shining: shield broad: mouth and legs pitchy: abdomen purple: fore-wings blackish brown, with two red, narrow, slightly undulating bands, one near the base, the other at two-thirds

of the length: hind-wings dark brown; veins black. Length of the body  $7\frac{1}{2}$  lines; of the wings 19 lines.

a. Silhet. From Mr. Argent's collection.b. Silhet. From Mr. Sowerby's collection.

#### 7 23. CERCOPIS OCTOPUNCTATA.

Cercopis octopunctata, Amyot et Serv. Hist. Nat. Hém. 559, 2, pl. 10, f. 6.

Java.

© 24. CERCOPIS BISPECULARIS.

Cercopis bispecularis, White, MSS.

Rufa, nitens, lata, nigro quadrimaculata; pectus nigrum; abdomen subtus nigro fasciatum; alæ anticæ nigro univittatæ et bifasciatæ, apice fuscæ.

Red, shining: shield broad, mostly occupied by two very large, nearly oval, black spots, in front of which are two small, nearly round black spots: breast black: hind-chest mostly black: underside of abdomen with two black bands: fore-wings with a short black stripe at the base, near which three united black spots form a curved band across the wing; another band is formed in the middle by three separate black spots; tips brown: hind-wings gray, brownish along the hind borders and at the tips, red at the base. Length of the body  $5-5\frac{1}{2}$  lines; of the wings 12-13 lines.

a, b. North India. From Mr. Warwick's collection.

#### O 25. CERCOPIS BIMACULA.

Rufa; thorax nigro unifasciatus et bimaculatus; alæ anticæ nigræ rufo bifasciatæ basi rufæ; alæ posticæ subcinereæ basi rufæ apice fuscæ.

Bright red, shining: shield adorned in front with a broad, short black band, whose hind border is concave, and in the disk with two large black spots: fore-wings black, red at the base, and with two irregular, slightly curved red bands; second band adjoining the reticulated part: hind-wings pale gray, red at the base, brown at the tips and along the hind borders. Length of the body  $5\frac{1}{2}$  lines; of the wings 14 lines.

a. Hong Kong. Presented by J. Bowring, Esq. b—g. ——?

## © 26. CERCOPIS PALLIDA.

Testacea; caput nigrum; abdomen fuscum, basi et apice testaceum; alæ anticæ luridæ, apice fuscæ.

Testaceous: head black, transversely striated, very convex in front: mouth testaceous: abdomen brown, testaceous at the base and at the tip: tips of the feet brown: fore-wings lurid, brown towards the tips: hind-wings gray; veins brown. Length of the body 5—6 lines; of the wings 14—16 lines.

a. India. From Mr. Stevens' collection.
b. ——?

# © 27. CERCOPIS SUBMACULATA.

Rufa; scutellum piceum, utrinque rufum; femora posteriora basi picea; alæ anticæ 6- vel 8-maculatæ, apice luridæ.

Pale red, shining: shield very minutely punctured; middle ridge very slight; scutcheon pitchy, striated across, red on each side: posterior femora piceous towards the base: fore-wings with six or eight pale brown spots in the disks, lurid towards the tips: hind-wings almost colourless, reddish at the base; veins pale red. Length of the body 8 lines; of the wings 18 lines.

a. Java. From Mr. Melly's collection.

## O 28. CERCOPIS SEMICINCTA.

Rufa; caput et prothorax rufa; abdomen subtus maculis nigris bivittatum; alæ anticæ nigro 7-maculatæ, apice fuscæ nigro marginatæ.

Red, shining: head and chest black: head pitchy or ferruginous beneath: scutcheon and hind-chest red: abdomen with a row of black spots along each side beneath: membranous part of the fore-wings red, very minutely punctured, occupying two-thirds of the length, adorned with nine black spots; reticulated part bordered with black, forming numerous areolets which are brown with pale borders; veins red; hind-wings pale brown; veins darker. Length of the body  $5\frac{1}{2}$  lines; of the wings 13 lines.

a, b. Java. From the East India Company's collection.

#### 5 29. CERCOPIS INCLUSA.

Ferruginea vel testacea; scutellum nigrum; abdomen purpureum; pedes nigri; tibiæ et femora antica ferruginea; alæ anticæ fuscæ, fulvo vel rufo bivittatæ et unifasciatæ, apice et ad costam nigræ; alæ posticæ rufæ, apice et margine postico fuscæ.

Bright testaceous, shining: mouth pitchy: shield with two black punctures on each impression in front; middle ridge very slight: scutcheon black: abdomen purple: legs black; shanks and fore-thighs ferruginous: fore-wings brown, black along the fore borders and towards the tips; two tawny stripes along the borders from the base to one-third of the length, where they are connected by a tawny band: hind-wings bright red, brown along the hind borders and towards the tips; veins black. Length of the body 6—7 lines; of the wings 16—18 lines.

Var. β. Stripes and bands of the fore-wings red. a—c. Ceylon. From Capt. Parry's collection.

# 30. CERCOPIS DORSALIS.

Picea; tibiæ tarsique ferruginea; alæ anticæ rufæ, nigro 8-maculatæ, apice nigræ.

Piceous, shining: shield very minutely punctured, impressed on each side in front: shanks and feet ferruginous: fore-wings red, black on the reticulated part; membranous part adorned with eight large, partly confluent, black spots: hind-wings brown; veins black. Length of the body 4 lines; of the wings 12 lines.

a. North India. From Mr. Warwick's collection.

# 31. CERCOPIS DORSIMACULA.

Rufa vel testacea; thorax nigro quadrimaculatus; pectus et venter nigra; abdomen maculis nigris bivittatum; alæ anticæ nigro 7-maculatæ apice luridæ.

Bright red, shining: head with a short transverse streak along each side of the hind border: shield with two very large black spots on each side of the disk, and with two smaller spots in front: breast and hind-chest black: abdomen black towards the base; a row of black spots along each side; under side black, excepting the

hind borders of the segments: fore-wings red; membranous part adorned with seven black spots, six of which are large, and more or less confluent, and form two curved bands; reticulated part lurid: hind-wings lurid, red at the base; veins brown, red towards the base. Length of the body  $6-6\frac{1}{2}$  lines; of the wings 17-19 lines.

Var.  $\beta$ . Abdominal segments with black bands.

Var. γ. Body and fore-wings testaceous, with the usual spots.
a. North Bengal. From Miss Campbell's collection.
b—h. ——?

## 32. CERCOPIS SEPTEMPUNCTATA.

Rufa; pectus et abdomen nigra; alæ anticæ nigro 7-maculatæ, apice luridæ.

Red, shining: tip of the mouth black: shield with two black punctures in the impression on each side of the front: breast and abdomen black: tip of the abdomen red: tips of the feet black: fore-wings with seven large black spots on the membranous part; a few black dots adjoining the reticulated part, which is lurid: hindwings gray, brown towards the tips and along the hind borders. Length of the body  $5\frac{1}{2}$ —7 lines; of the wings 14 lines.

<sup>©</sup> Var. β. Shield testaceous: abdomen red.

a-c. -? Localety and or

#### 4 33. CERCOPIS UNDATA.

Nigra; thorax rufo vel testaceo fasciatus; abdomen cyaneum; alæ anticæ rufo bifasciatæ basi rufæ.

Black, shining: shield with a broad red band, which is widened on each side: abdomen blue: membranous part of the fore-wings red at the base, and with two interrupted red bands in the disk; first band slightly curved; second band formed of three large spots, the middle one advancing into the reticulated part: hind-wings pale gray, brownish at the tips and along the hind border; veins black, red at the base. Length of the body 5—6 lines; of the wings 14—16 lines.

Var.  $\beta$ . First band of the fore-wings uninterrupted; two spots of the second band confluent.

Var. γ. Band of the shield testaceous: first band of the forewings uninterrupted.

Var. 8. Band of the shield testaceous, very broad: abdomen dark testaceous: bands of the wings uninterrupted.

a, b. Silhet. From Mr. Stainforth's collection.

c. ——?

#### O 34. CERCOPIS TRIGONA.

Nigro-cyanea; scutellum rufo marginatum; abdomen rufum, piceo trifasciatum, subtus nigrum; pedes rufi; alæ anticæ nigro-fuscæ, basi fasciisque duabus connexis rufis.

Bluish black, shining: scutcheon red on each side and at the tip: abdomen bright red; three short pitchy bands on the disk; under side black, with a red tip: legs red: fore-wings brownish black, red at the base, and with two red bands; first band connected with the red at the base in the disk and along the hind border, and including with a nearly triangular brown part; second band connected with the first near the hind border. Length of the body 5—6 lines; of the wings 14—15 lines.

a. North India. From Mr. Warwick's collection. b-d.

#### 35. CERCOPIS FERRUGINEA.

Ferruginea; caput nigrum; scutellum fulvum; abdomen piceum; alæ anticæ fulvo fasciatæ, basi fulvæ, apice piceæ; alæ posticæ cinereæ.

Pale ferruginous, shining: head black: chest very minutely punctured; shield with two black punctures in the impression on each side of the front; borders pitchy: scutcheon tawny: abdomen pitchy, ferruginous at the base: feet black towards the tips: fore-wings narrow, tawny at the base, pitchy at the tips; a tawny band adjoining the reticulated part: hind-wings gray; veins black, tawny a the base and along part of the fore border. Length of the body  $5\frac{1}{2}$  lines; of the wings 14 lines.

a. ——?

#### © 36. CERCOPIS FULVICOLLIS.

Testacea; scutum flavo marginatum; pectus et scutellum picea; abdomen purpureum; pedes picei; tibiæ rufæ; alæ anticæ nigræ; alæ posticæ cinereæ.

Testaceous, shining: chest very minutely punctured; shield with two black punctures in the impression on each side of the front;

border yellow; breast and scutcheon pitchy: abdomen purple: legs pitchy; thighs ferruginous towards the tips; shanks red: fore-wings black: hind-wings dark gray; veins black. Length of the body 4—5 lines; of the wings 12—13 lines.

a, b. Java. From Mr. Argent's collection.

#### O 36. CERCOPIS CONCOLOR.

Picea, subtus ferruginea; abdomen rufum, maculis piceis bivittatum; femora postica rufu; alæ anticæ ferrugineæ nigro maculatæ; alæ posticæ cinereæ.

Pitchy, shining: head beneath and breast ferruginous: abdomen red, with a row of pitchy spots along each side: hind-thighs and tips of fore-thighs red; hind-shanks and hind-feet red towards the base: fore-wings ferruginous, with several indistinct black spots; reticulated part brown: hind-wings gray. Length of the body 4 lines; of the wings 10 lines.

a, b. Java. From the East India Company's collection.

c, d. Java. From Mr. Argent's collection.

#### 6 37. CERCOPIS CYANEIVENTRIS.

Nigra, subtus ferruginea; scutellum piceum; abdomen cyaneum; pedes ferruginei; alæ anticæ nigro-fuscæ apice luridæ; alæ posticæ cinereæ, basi apiceque fuscæ.

Black, ferruginous beneath: shield broad, clothed with short pale hairs, hardly impressed in front; scutcheon pitchy: abdomen blue: legs ferruginous: fore-wings blackish brown, lurid towards the tips where the veins are, red: hind-wings gray, brownish at the base, at the tips, and along the hind border; veins black, tawny at the base. Length of the body 5 lines; of the wings 13 lines.

a. Java. From Mr. Argent's collection.

#### 38. CERCOPIS 4-MACULATA.

Lurida; thorax nigro unifasciatus et bimaculatus; pectus nigrum; abdominis segmenta subtus nigro interruptè fasciata; alæ anticæ nigro 7-maculatæ; alæ posticæ basi rufescentes.

Lurid, shining: shield adorned on the impressions in front with a short, broad, black band, whose hind border is very concave;

2 N

two very large black spots on the disk behind it: breast black: under side of the abdomen with an interrupted black band on each segment: fore-wings adorned with seven black spots; six of these are large and mostly confluent, and form two slightly curved bands; the seventh is close to the reticulated part: hind-wings reddish at the base; veins brown, tawny at the base. Length of the body 7 lines; of the wings 17 lines.

a. ——?

#### 39. CERCOPIS DORSIVITTA.

Nigra; caput rufum; thorax rufo trivittata; abdomen supra purpureum, apice et utrinque rufum; alæ antivæ nigro-fuscæ, rufo 8-maculatæ, apice luridæ; alæ posticæ subfuscæ, basi rufæ.

Black, slightly shining: head red, shining, almost smooth, black along the hind border: shield rugulose, slightly impressed on each side in front, with three broad red stripes, which are shortened behind: abdomen purple above, red at the tip and along each side; fore-wings blackish brown, adorned with eight large red spots, three on the fore border, three on the hind border, one on the disk, and one near the tip, partly in the reticulated part, which is lurid, and occupies about one-fourth of the length of the wing: hind-wings pale brown, bright red at the base. Length of the body  $8\frac{1}{2}$  lines; of the wings 21 lines.

a, b. North India. From Mr. Warwick's collection.

#### O 40. CERCOPIS HUMERALIS.

Nigra; caput rufum, nigro varium; thorax rufo trivittatus; alæ anticæ rufo 7-maculatæ, apice luridæ; alæ posticæ subfuscæ.

Black, shining: head red, black on each side in front and along the hind border: shield with three red stripes, the side pair oblique, and extending along each side from the fore border to the base of each fore-wing: fore-wings convex along the fore borders, adorned with seven red spots, three on the fore border, three on the hind border, and one in the disk near the tip; the first on the hind border forms a short stripe, and the second a short band: tips lurid: hind-wings pale brown. Length of the body 8 lines; of the wings 18 lines.

a. Silhet. From Mr. Stainforth's collection.

# 41. CERCOPIS DORSIMACULA.

Nigra; caput supra luteum; thorax rufo quadrimaculatum, luteo bivittatum; abdomen supra purpureum; alæ anticæ piceæ, rufo 8-maculatæ, apice luridæ; alæ posticæ fuscæ, basi rufæ.

Black, dull: head luteous, black beneath: chest minutely rugulose; shield with a red spot on each side of the disk, and with a luteous stripe along each side from the fore border to the base of the fore-wing; scutcheon impressed on the disk, with a red spot on each side of the base: abdomen purple and shining above: fore-wings pitchy, convex along the fore border, adorned with eight red spots, three on the fore border, one on the hind border at the base, and four on the disk, one of them very near the hind border; border of the tip lurid: hind-wings brown, red at the base: veins black. Length of the body 7 lines; of the wings 18 lines.

a. Malabar. From Mr. Walker's collection.

#### O 42. CERCOPIS CONNEXA.

Lurida; scutum fulvo marginatum; scutellum rufum; pectus nigrum; abdomen et pedes rufa; alæ anticæ fusco-rufæ, nigro 7-maculatæ, apice fuscæ; alæ posticæ civereæ.

Lurid, shining: shield broad, with a tawny border, very minutely punctured, with a slight impression on each side in front; scutcheon small, red, concave towards the base; breast black: abdomen and legs red: membranous part of the fore-wings red, tinged with brown, adorned with seven black spots, which form two interrupted curved bands; reticulated part brown: veins red: hindwings gray; veins brown. Length of the body  $4\frac{1}{2}$ —5 lines; of the wings 12—13 lines.

a-c. ?

#### ○ 43. CERCOPIS FULYA.

Fulva; scutellum apice et utrinque rufum, abdomen rufum; segmenta subtus nigro fasciata; pedes rufi; alæ anticæ rufescentes nigro 7-maculatæ, apice luridæ; alæ posticæ cinereæ, basi rufæ.

Tawny, shining: mouth red: chest very minutely punctured; shield hardly impressed in front; middle ridge indistinct; scutcheon red on each side and at the tip: abdomen red; a black band

on each segment beneath: legs red: membranous part of the forewings reddish, adorned with seven black spots, which form two interrupted slightly curved bands; a few black marks on the disks of some of the areolets of the reticulated part, which is lurid; veins red: hind-wings gray, red at the base; veins brown, red towards the base. Length of the body  $4-5\frac{1}{2}$  lines; of the wings 11-13 lines.

*a-c.* ---?

## 44. CERCOPIS PROXIMA.

Picea; caput, scutellum, pectus, abdomen et pedes ferruginea; alæ anticæ ferrugineæ, apice fuscæ; alæ posticæ cinereæ.

Body pitchy, shining: head ferruginous; front very convex, transversely furrowed, not keeled: chest thinly and very minutely punctured; scutcheon and breast ferruginous: abdomen pale ferruginous: legs ferruginous: fore-wings pale ferruginous, very minutely punctured; reticulated part brown: hind-wings gray; veins brown, tawny at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 11 lines.

a. Java. From the East India Company's collection.

#### O 45. CERCOPIS COSTALIS.

Nigra; caput et thorax luteo fasciata; pectus flavo maculatum; abdomen purpureum, subtus flavum maculis nigris trivittatum; pedes fulvi; femora et tibiæ anticæ fusca; femora subtus flava; alæ anticæ fuscæ rufo bifasciatæ et univittatæ, flavo univittatæ.

Black: head shining; front adorned with a semicircular luteous band, which is prolonged in a conical form to the face; the latter is smooth, very convex, with slight transverse furrows, not keeled, yellow along each side: mouth yellow, with a pitchy tip: chest dull, very thickly punctured; fore-chest with a luteous band along the fore border, and extending on each side to the base of the fore-wing; hind border slightly concave: scutcheon lurid on each side; breast with large yellow marks along each side: abdomen purple, black, with yellow bands at the tip; under side yellow, with three rows of transverse black spots; the side rows on the rim, which is very broad: legs tawny; thighs and fore-shanks brown; thighs yellow beneath: fore-wings dark brown, with two narrow pale red bands, one at one-third, the other at two-thirds of the length; a yellow stripe extending along the fore border from the base to the

first band, where it acquires a tawny hue, and extends round the tip to the second band; a pale red stripe extending along the hind border from the base nearly to the first band: hind-wings pale brown, almost colourless in part of the disk, luteous at the base; veins black. Length of the body  $5\frac{1}{2}$  lines; of the wings 7 lines.

a. Malabar. Presented by the Entomological Club.

### 46. CERCOPIS HILARIS.

Nigra; caput et thorax luteo fasciata; pectus flavum, nigro maculatum, ejus discus niger; abdomen purpureum, subtus flavum maculis nigris trivittatum; pedes fulvi; tarsi fusci; alæ anticæ fuscæ flavo bifasciatæ et univittatæ.

Black: head shining; front adorned with a semicircular luteous band, which is prolonged in a very broad conical form, and occupies the disk of the face; the latter is pitchy, smooth, very convex, with slight transverse furrows, not keeled; sides and epistoma yellow: mouth yellow, with a black tip: chest dull, very thickly punctured: fore-chest with a luteous band along the fore border, extending on each side to the base of the fore-wing; hind border slightly concave: breast yellow; disk black; two or three black spots on each side: abdomen purple; under side yellow, with three rows of transverse black spots; the side rows on the rim which is very broad: legs tawny; thighs paler than the shanks; feet and tips of the shanks brown: fore-wings dark brown, with two narrow yellow bands; the first at one-third of the length, interrupted in the disk, and marked by some dots from thence to the hind border; the second at two-thirds of the length, slightly waved; a yellow spot in the disk between it and the tip; a yellow stripe extending along the fore border from the base to the first band: hind-wings grayish, tinged with brown at the tips and along the hind borders, luteous at the base: veins black. Length of the body  $4\frac{1}{2}$  lines; of the wings 12 lines.

a. Malabar. Presented by the Entomological Club.

## 47. CERCOPIS? STELLATA.

Cercopis stellata, Guér. Icon. Règ. Anim. Texte, 368. Malacca.

### © Genus 2. TOMASPIS.

Cercopis, Germar, St. Farg. et Serv., Burm., Blanch. Tomaspis, Amyot et Serv. Hist. Nat. Hém. 560, 456.

### 1. Tomaspis furcata.

- Cercopis furcata, Germ. Mag. Ent. iv. 39, 2. Burm. Handb. Ent. ii. 124, 2. Blanch. Hist. Nat Ins. iii. 187, 3. Hém. pl. 14, f. 2.
- Cercopis collaris, St. Fary. et Serv. Enc. Méth. x. 605, 2. Tomaspis furcata, Amyot et Serv. Hist. Nat. Hém. 560, 1.
  - a. Brazil. Presented by John Miers, Esq.
  - b. Brazil. From Mr. Stevens' collection.

## c—h. Brazil.

### Q. Tomaspis nigricans.

Tomaspis nigricans, Amyot et Serv. Hist. Nat. Hém. 560, 2.

a. Brazil. Presented by J. G. Children, Esq.

### 3. Tomaspis apicalis.

Cercopis apicalis, St. Farg. et Serv. Enc. Méth. x. 605, 5. Cayenne.

### O 4. TOMASPIS COCCINEA.

O Cercopis coccinea, Fabr. Ent. Syst. iv. 48, 4. Syst. Rhyn. 93, 21.

West Indies.

### 0 5. Tomaspis quadrifasciata.

Cercopis quadrifasciata, St. Farg. et Serv. Enc. Méth. x. 605, 8.
Brazil.

### 6. Tomaspis divisa.

Rufa; thoracis discus, pectus, abdomen et pedes nigra; alæ anticæ nigro-fuscæ, basi rufæ.

Pale red: head convex, but not angular in front; a slight ridge along each side of the middle one; transverse furrows very shallow: mouth and antennæ black, the former red at the base: disk of the chest black, excepting the slight middle ridge, which is red: breast, abdomen, and legs black: fore-wings blackish brown, pale red at the base, and for a short space thence along the fore border: hind-wings gray, brown at the tips and along the hind border; veins black, red at the base. Length of the body  $5\frac{1}{2}$  lines; of the wings 14 lines.

a. Brazil. Presented by the Entomological Club.

### O Genus 3. RHINAULAX.

Rhinaulax, Amyot et Serv. Hist. Nat. Hém. 560, 457.

### O 1. RHINAULAN ANALIS.

Cercopis analis, Fabr. Ent. Syst. iv. 49, 7. Syst. Rhyn. 93, 23. Rhinaulax maculipennis, Amyot et Serv. Hist. Nat. Hém. 561, 1.

a-h. South Africa. Presented by Dr. A. Smith. i, j. South Africa. From Mr. Argent's collection. k, l.

Var. β. Fore-wings dingy yellow instead of red.
m. South Africa. Presented by Dr. A. Smith.
n, o. Cape.

### Genus 4. TRIECPHORA.

Triecphora, Amyot et Serv. Hist. Nat. Hém. 561, 458.

Cicada, Linn., Scop., Geoffr., Panz.

Cercopis, Fabr., Germ., Burm., Curt., Ramb., Blanch., Guér., Fieb.
Tettigonia, Tign.

## 1. TRIECPHORA SANGUINOLENTA.

Cercopis sauguinolenta, Burm. Handb. Ent. ii. 1, 125, 7. Dum. Cons. Gen. Ins. 219, pl. 38, f. 6. Crochard, Ed. Règ. An. pl.

OVar. 1. nigra, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 185.

6 Cercopis atra, Herrich-Schaff. Nom. Ent. i. 66. O Var. a. Burm.

Cicada sanguinolenta, Linn. Syst. Nat. i. 2, 708, 22.

O Tettigonia sanguinolenta, Oliv. Enc. Meth. pl. 114, f. 1.

Cercopis sanguinolenta, Fabr. Ent. Syst. iv. 49, 6. Syst. Rhyn. 92, 20. Germ. May. Ent. iv. 44, 13, f. 4, 20. Faun. Ins. iv. pl. 20. Curt. Brit. Ent. 461, 1. Tign. Hist. Nat. Ins. iv. 151, pl. 6, f. 1. Duf. Réch. Hém. 99, 1. Amyot et Serv. Hist. Nat. Hém. 561. Fieb. Ent. Monogr. 7, 4, 9, pl. 1, f. 8-10. Herrich-Schæff. Nom. Ent. i. 66.

Triecphora, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 185, 414.

O Var. b. Burm.

O Cicada sanguinolenta, Scop. Faun. Carn. ii. 112, 330.

Cercopis mactata, Germ. Mag. Ent. iv. 44, 14. Germ. Faun. Ins. xiv. pl. 11. Herrich-Schaff. Nom. Ent. i. 66. Fieb. Ent. Monogr. 7, 2,

DEpiemata, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 186, 415. Crec Scep. ]

Var. c. Burm.

O Cicada sanguinolenta, Panz. Faun. Germ. 33, 12. Naturf. ô, pl. 2, f. 1, 2. Fuesl. Helvet. 24, 456. Tign. Ins. 151, pl. 6, f. 1.

Geoff. Ins. i. 418, pl. 8, f. 6. Stoll, Cic. 34, pl. 5, f. 27.

Cercopis vulnerata, Rossi. Illig. Germ. Mag. Ent. iv. 45, 15.

Curt. Brit. Ent. 461, 2. Herrich-Schæff. Nom. Ent. i. 66.

Fieb. Ent. Monogr. 7, 1. Blanch. Hist. Nat. Ins. 188, 8, pl. 14, f. 4. Amyot et Serv. Hist. Nat. Ins. 562.

a, b. England.

c, d. Presented by J. G. Children, Esq.

e. France. Presented by M. Goureau.

f, g. South of France.

h-o. France.

p, q. Spain. Presented by Capt. Parry.

r-t. Turkey.

# 2. TRIECPHORA DORSATA.

- O Cercopis dorsata, Ahrens, Faun. Ins. i. pl. 21. Germ. Mag. Ent. iv. 43, 11. Burm. Handb. Ent. ii. 1, 125, 5.
- O Trispilæma, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 187, 418. France, Germany.
  - 3. TRIECPHORA ARCUATA.
- Cercopis arcuata, Fieber, Ent. Monogr. 7, 3. Bohemia.
  - 4. Triecphora 5-maculata.
- O Cercopis 5-maculata, Hoffm., Germ. Mag. Ent. iv. 43, 12. Burm. Handb. Ent. ii. 125, 6. Sassarus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 187, 417.

a—c. Turkey-in-Asia. From Mr. Loftus' collection.

- 5. TRIECPHORA NUMIDA.
- Cercopis numida, Guér. Icon. Règ. Anim. Texte, 369. Constantina.
  - 6. TRIECPHORA PLAGIATA.
- Cercopis plagiata, Burm. Handb. Ent. ii. 125, 4.
  Brazil.
  - 7. TRIECPHORA COCCINEA.
- © Cercopis coccinea, Fabr. Ent. Syst. iv. 48, 4. Syst. Rhyn. 93, 21. West Indies.
  - 0 8. TRIECPHORA BICOLOR.
  - Cercopis bicolor, Fabr. Ent. Syst. Suppl. 523, 11. Syst. Rhyn. 93, 26.

Cape.

# 9. TRIECPHORA ANALIS.

Cercopis analis, Fabr. Ent. Syst. iv. 49, 7. Syst. Rhyn. 93, 23. Cape.

### 70. Triecphora basirubra.

Nigra; pectus rufo bimaculatum; femora apice tibiæque basi rufa; alæ anticæ rufo unifasciatæ et bimaculatæ.

Black, pubescent: head transversely furrowed and flattened in front, with three distinct keels, forming an almost right angle on each side of the side pair: chest minutely and closely punctured: breast with a small red spot near the base of each hip: thighs red towards the tips; shanks red at the base: fore-wings with a small red spot at the base; a larger red spot in the disk, and beyond two-thirds of the length a red band, which does not join the fore border: hind-wings grayish, pale brown at the tips and along the hind borders. Length of the body 3 lines; of the wings 8 lines.

a. ——?

### O 11. TRIECPHORA CONTIGUA.

Nigra; scutelli latera, abdomen et pedes rufa; alæ anticæ fuscæ, rufo bifasciatæ et univittatæ fulvoque univittatæ.

Black, shining: head and chest finely punctured: epistoma with distinct, parallel, transverse furrows on each side of the keel: mouth red, with a pitchy tip: antennæ ferruginous: scutcheon with a bright red rim on each side, tawny at the tip: breast pitchy, partly red: abdomen and legs bright red: fore-wings brown, with two bright red bands; a tawny stripe diverges from the base of the fore border to the disk, and extends to the first band, and a red stripe extends from the base along the hind border nearly to the first band, which is oblique; second band upright, dividing the network of the wing from the membranous part: hind-wings colourless, pale brown along the hind border and at the tips; veins black. Length of the body 3 lines; of the wings 8 lines.

a. Honduras. From Mr. Dyson's collection.

## 12. TRIECPHORA PROPINQUA.

Nigro-viridis; pectus rufum, piceo bimaculatum; abdomen rufum, apice nigrum; pedes nigri; alæ anticæ fuscæ luteo bifasciatæ, rufo unimaculatæ et univittatæ.

Greenish black, shining: head and chest finely punctured: epistoma with distinct parallel transverse furrows on each side of the keel: mouth red, with a black tip: antennæ black: scutcheon with a red rim on each side, tawny at the tip; breast red, with a large pitchy spot on each side: abdomen red, with a black tip: legs black: fore-wings dark brown, with two orange bands, with a red spot near the base of the fore border, and with a red stripe extending from the base along the hind border to the first band, which is oblique; second band upright, dividing the net-work of the wing from the membranous part: hind-wings almost colourless, pale brown at the tips and along the hind border; veins black. Length of the body  $2\frac{1}{2}$  lines; of the wings 7 lines.

a. Venezuela. From Mr. Dyson's collection.

### ○ 13. TRIECPHORA SCITA.

Nigra; caput flavum, nigro maculatum; thorax flavo fasciatus; pectus rufo-fulvum; abdomen flavum rufo marginatum et fasciatum, apice piceum; pedes rufi, tibiis anticis tarsisque nigris; alæ anticæ fuscæ, flavo unimaculatæ, unifasciatæ et univittatæ.

Black, shining: head and chest finely punctured: head yellow, with a large transverse subquadrate black spot on the front; epistoma with indistinct parallel transverse furrows on each side of the keel, black towards the front: mouth yellow, black towards the tip: antennæ yellow, black towards the base: a broad yellow band along the fore border of the chest: breast reddish tawny: abdomen vellow, red along each side and along the hind borders of the segments, pitchy towards the tip: legs red; tarsi, posterior tibiæ towards the tips, and fore tibiæ black: fore-wings dark brown, thickly punctured, with a broad short yellow stripe extending from the base along the hind border, with a yellow triangular spot, extending from the fore border to the disk at one-third of the length, and with a broad yellow upright band which divides the reticulations from the membranous part: hind-wings pale brown, almost colourless beneath the fore border towards the base; veins black. Length of the body  $3\frac{1}{2}$  lines; of the wings 9 lines.

a-c. Brazil. Presented by John Miers, Esq.

### O 14. TRIECPHORA BELLA.

Nigra; caput subtus et pectus lutea; thorax luteo bivittatus; pedes lutei, tibiis tarsisque posticis nigris; alæ anticæ apice flavo maculatæ.

Deep black: head and chest shagreened: head beneath and breast orange; an orange spot on each side of the front; epistoma with indistinct parallel slightly oblique ridges on each side of the keel: mouth orange with a black tip: antennæ black, orange towards the base; third joint emitting a bristle, which is longer and more slender than the fourth joint; an orange stripe along each side of the chest as far as the base of the fore-wing; a large pitchy spot on each side of the hinder part of the breast: abdomen black, shining, broader than the chest; lower appendage recurved, forked: legs orange; middle-feet and tips of fore-feet pitchy; hind-shanks and hind-feet black, hairy, the former orange at the base: forewings black, long and narrow, with a large pale yellow transparent spot, occupying almost the whole breadth near each tip: hind-wings almost colourless, broader than the fore-wings, pale brown at the tips and along the hind border; veins black. Length of the body 4 lines; of the wings 12 lines.

a. Columbia. From Mr. Turner's collection.

## O 15. Triecphora ferruginea.

Testacea; alæ anticæ ferrugineæ.

Male.—Testaceous, shining: head and thorax finely punctured: head above somewhat depressed, with a pitchy spot on each side between the eyelet and the eye; epistoma semi-transparent, with a broad flat conical front, on each side of which are slightly curved parallel transverse ridges: antennæ black: chest with a pale pitchy spot on each side near the fore border; scutcheon with a broad rim on each side: two lower appendages of the abdomen long, slender, slightly curved upward, furnished each with a long setiform process, which forms nearly a right angle with the first joint, between these are two short slightly curved processes; upper appendages short: tips of the feet pitchy: fore-wings ferruginous, with an irregular pale band near the base: hind-wings pale gray, with a slight brown tinge along the hind borders and at the tips; veins black. Length of the body 3 lines; of the wings 8 lines.

- a. Philippine Islands. From Mr. Cuming's collection.
- b. Philippine Islands. From Mr. Wood's collection.

### 16. TRIECPHORA MACULATA.

Rufa; alæ anticæ fusco unifasciatæ et bimaculatæ.

Bright red: head and chest finely punctured: crown with a longitudinal suture on each side of the disk; epistoma with a flat linear front, which is conical towards the mouth, the latter has a black tip: feet and tips of shanks black: fore-wings thickly punctured, with a broad, dark brown, slightly oblique band across the middle, and with two large dark brown spots, forming an interrupted band near the tip: hind-wings almost colourless; veins black. Length of the body 2 lines; of the wings 6 lines.

a. North West Coast of New Holland. From Mr. Dring's collection.

### O 17. TRIECPHORA AFRA.

Nigra; abdomen et pedes picea; alæ posticæ fusco-cinereæ.

Black: head and chest thickly punctured: crown with two longitudinal furrows on the disk; epistoma in front flat, long spindle-shaped, with a rim on each side; sides with distinct, parallel, slightly oblique ridges: mouth, abdomen, and legs pitchy: fore-wings thickly punctured: hind-wings brownish gray; veins black. Length of the body  $2\frac{1}{2}$  lines; of the wings 7 lines.

a. Cape. Presented by M. Serville.

### O 18. Triecphora inconstans.

Nigra; caput, pectus, abdomen et pedes rufa; tarsi nigri; alæ anticæ rufo unimaculatæ et unifasciatæ.

Black: head and chest thinly and coarsely punctured: head red; crown rather depressed; epistoma with a slightly concave spindle-shaped front, which has indistinct, parallel, slightly slanting, transverse ridges on each side: mouth red, with a black tip: chest along the fore border and scutcheon reddish: breast, abdomen, and legs bright red: feet and tips of shanks black: fore-wings black, thickly punctured, with a red curved band near each tip, and a red spot on the base of the fore border: hind-wings grayish; veins black. Length of the body 3 lines; of the wings 8 lines.

a. New Holland. Presented by Sir J. Richardson.

2 o

## O 19. TRIECPHORA ANTICA.

Lutea; caput nigrum; pedes fulvi; tarsi nigri; alæ anticæ testaceæ.

Male.—Luteous, shining: head and chest very finely punctured: head black; face convex, forming, with the epistoma, a right angle, which is slightly concave in the disk; a row of indistinct transverse parallel ridges on each side: tip of the mouth black: antennæ black, tawny towards the tips: scutcheon emarginate on each side: abdominal appendages slightly reverted: legs tawny; tips of anterior shanks and feet black: fore-wings testaceous; their disks paler: hind-wings slightly tawny; veins tawny. Length of the body 3 lines; of the wings 9 lines.

a-e. Venezuela. From Mr. Dyson's collection.

### Genus 5. MONECPHORA.

Cercopis, p., Fabr. St. Farg. et Serv. Monecphora, Amyot et Serv. Hist. Nat. Hém. 562, 459.

### 1. Monecphora cingulata.

Cercopis cingulata, St. Farg. et Serv. Enc. Méth. x. 606, 10. Monecphora cingulata, Amyot et Serv. Hist. Nat. Hém. 562, 1. S. America.

### 2. Monecphora mutata.

© Cercopis mutata, Fab. Ent. Syst. iv. 48, 5. Syst. Rhyn. 93, 22. Coqueb. Illustr. i. 33, pl. 8, f. 8.

Senegal.

### 3. Monecphora humeralis.

Cercopis humeralis, St. Farg. et Serv. Enc. Méth. x. 606, 11. Brazil.

## 4. Monecphora lanio.

Cercopis lanio, St. Farg. et Serv. Enc. Méth. x. 606, 12. Brazil.

### 5. Monecphora Inca.

Cercopis Inca, Guér. Icon. Règ. Anim. Texte, 368.
a. Mexico.

### 6. Monecphora maculata.

Cercopis maculata, Fabr. Ent. Syst. iv. 48, 3. Syst. Rhyn. 91, 12.

a, b. Sierra Leone. Presented by the Rev. D. F. Morgan. c-e. ?

### 6 7. Monecphora areata.

Cercopis areata, Germ.

Rufa, subtus nigra; caput nigro fasciatum; facies rufo vittata; thorax niger, rufo fasciatus et marginatus; femora nigra, apice rufa; alæ anticæ basi luteæ; alæ posticæ cinereæ, fusco marginatæ.

Red, covered with tawny down, black beneath: head adorned between the eyes with a broad black band, which is convex in front; face very convex and prominent, with a keel, which is red along half its length, and has eight slight furrows on each side: mouth with a red band and a red tip: chest black, with a red band, and on the fore-part with a red border: legs red; thighs black, with red tips: fore-wings bright red, orange towards the base, with the exception of the fore-border: hind-wings gray, brown at the base, at the tips, and along the hind border; veins black, red towards the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a. Cape. From M. Dregé's collection.

b. Port Natal. From M. Gueinzins' collection.

### 8. Monecphora arithmetica.

Cercopis arithmetica, Germ.

Rufa, subtus nigra; caput nigro fasciatum; facies rufo vittata; thorax niger, rufo vittatus et semimarginatus; pedes nigri; tibiæ rufæ; alæ anticæ nigro quinquemaculatæ; alæ posticæ subluridæ, basi apiceque fuscæ.

Bright red, covered with tawny down, black beneath: head adorned between the eyes with a broad black band, which is convex

in front; face very convex and prominent, with a keel, which is red along half the length, and has about twelve slight furrows on each side: chest black, with a broad red band, which is widened at each end, and occupies the sides of the fore part: segments of the abdomen with broad black bands; tip testaceous: legs black; shanks red: fore-wings with five black spots; two on the disk near the base; three near the tips, one on the fore border, another on the hind border, the third on the disk: hind-wings slightly lurid, brown towards the base and at the tips; veins tawny. Length of the body 5 lines; of the wings 11 lines.

a, b. South Africa. Presented by Dr. A. Smith. c. Natal. From Dr. Krauss' collection.

d, e. Cape. From M. Dregé's collection.

### 9. Monecphora phænicoptera.

Cercopis phænicoptera, Germ.

Nigra; capitis latera rufa; facies rufo vittata; thorax rufo fasciatus et semi-marginatus; abdominis dorsum rufum; pedes rufi; femora postica nigro fasciata; alæ anticæ rufæ; alæ posticæ fuscæ.

Black: sides of the headred; face very convex and prominent, with a red keel on each side, on which there are about nine slight furrows; epistoma and mouth red: thorax red along the fore border and the hind border, adorned with an irregular interrupted black band; abdomen red above: legs red; hind-thighs with black bands: forewings bright red: hind-wings brown, paler towards the base; veins brown, red towards the base. Length of the body 3 lines; of the wings 8 lines.

a. South Africa. Presented by Dr. A. Smith. b, c. Cape. From M. Dregé's collection.

## 10. Monecphora flammigera.

Cercopis rubra? Fab. Syst. Rhyn. 93, 22. Coqueb. Ill. Icon. i. 23, pl. 8, f. 8.

Rufa; alæ posticæ sublimpidæ.

Bright red, rather narrow: head impressed above; front shining, very convex; keel and transverse furrows slight: tip of the mouth black: chest roughly punctured, somewhat rugulose: tips of the feet black: hind-wings almost colourless; veins black. Length of the body 5 lines; of the wings 12 lines.

## 11. Monecphora incarnata.

Sanguinea; thorax nigro trifasciatus; pectus, abdomen, femora et tarsi nigra; alæ anticæ nigro variæ.

Bright crimson colour: head above with a black reversed V-shaped furrow; face and epistoma very convex and prominent, forming an almost right angle, black on each side, clothed with short black hairs: mouth and antennæ black: chest roughly punctured, with three black bands; the first half-interrupted; the second interrupted; the third entire: breast and abdomen black; thighs black, with red tips; feet and tips of shanks black: fore-wings with a short angular black stripe in the disk near the base, and with several black marks near the tips, which are black; cross-veins very few: hind-wings almost colourless, dark brown about the hind border at the base; tips brown; veins tawny, red at the base and along the fore borders, brown at the tips. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a-i. Interior of South Africa. Presented by Dr. A. Smith.

## 7 12. Monecphora flexuosa.

Viridis; scutellum, abdomen et pedes rufa; femora nigro vittata; alæ anticæ fuscæ, rufo bivittatæ et unifasciatæ.

Metallic green, tinged with blue and purple: head and chest shagreened: head almost flat above; face very convex, with a slight keel, on each side of which are parallel slightly oblique ridges: mouth red, with a black tip: antennæ black, red at the base: sentellum red, emarginate on each side: abdomen red; appendages black, reverted: legs red; thighs striped with black: fore-wings dark brown, thickly punctured, with two pale red stripes, which proceed from the base to one-third of the length, where they are curved upward; a pale red waved band at two-thirds of the length: hindwings pale brown; veins black, bright red at the base. Length of the body 4 lines; of the wings 10 lines.

a. ——?

### 3. Monecphora radiata.

Nigra; thorax ferrugineo fasciatus, vittis duabus scutelloque fulvis; pedes picei, femoribus subtus tibiisque posticis fulvis; alæ anticæ rufo quinque vittatæ.

Black: head and chest rugulose: head above ferruginous on the disk, tawny along the fore border; face very convex, tawny along the keel, piceous, and with distinct parallel cross ridges on each side: mouth ferruginous, with a black tip: antennæ pitchy: fore-chest ferruginous along the fore border, having on each side a tawny stripe, which is dilated in front; tip and scutcheon dull tawny: breast tawny about the hips: legs pitchy; thighs beneath and hips tawny; hind-shanks tawny, with pitchy tips: fore-wings thickly punctured, adorned with five pale red stripes, which accompany the longitudinal veins and spread over nearly the whole breadth at the base: hind-wings brown; veins black. Length of the body  $4\frac{1}{2}$  lines; of the wings 12 lines.

a. Venezuela. From Mr. Stevens' collection.

## 14. Monecphora rubicunda.

Fusco-testacea; caput fusco quadrimaculatum; scutellum, abdomen et pedes rufa; alæ anticæ fuscæ, basi rufæ rufoque bifasciatæ.

Brownish testaceous, shining: head and fore-chest finely punctured: head above depressed, with a brown spot on each side between the eyes, and two in front of the eyelets; face very convex, clothed with short black hairs; its keel very slight; the parallel cross-furrows on each side indistinct; scutcheon and abdomen bright red; the latter tawny on each side at the tip: legs bright red; fore-wings brown, bright red at the base, near which the disk is somewhat tawny; two pale red slightly zigzag bands, one at one-third, the other at two-thirds of the length of the wing: hind-wings slightly gray, pale brown at the tips and along the hind-border Length of the body  $3\frac{1}{2}$ —4 lines; of the wings 10—11 lines.

a, b. Brazil. Presented by John Miers, Esq.

## 2 15. Monecphora crocea.

Lutea; abdomen basi, pectus et pedes fulva; femora antica nigro vittata; alæ anticæ fuscæ fulvo univittatæ luteo bifasciatæ.

Luteous, shining: head and chest finely punctured: head above concave on each side; face very convex, slightly compressed, with a row of indistinct parallel slightly oblique cross ridges on each side of the keel: tip of the mouth black: abdomen at the base, breast, and legs tawny; fore-thighs striped with black; tips of the tarsi black: fore-wings brown, with two broad luteous bands, whose edges are whitish; a short tawny stripe along the fore border from

the base: hind-wings almost colourless; veins tawny. Length of the body 3 lines; of the wings 8 lines.

a. Venezuela. From Mr. Dyson's collection.

### O 16. Monecphora bifascia.

Nigra; scutellum apice fulvum; pectus, abdomen et pedes rufa; alæ anticæ fuscæ, basi fasciisque duabus rufis.

Black: head and chest finely punctured: head reddish about the border and beneath; face convex; keel prominent; ridges on each side distinct, parallel, oblique: mouth reddish, with a black tip: tip of the scutcheon tawny: breast, abdomen, and legs red; feet black towards the tips: fore-wings brown, red at the base, adorned with two narrow pale red bands, one at one-third, the other at two-thirds of the length: hind-wings pale brown; veins black, red at the base. Length of the body  $3-3\frac{1}{2}$  lines; of the wings 8-9 lines.

a, b. ----?

## 2 17. Monecphora viridescens.

Viridis; abdomen apice rufum; pedes rufi; femora nigra; alæ anticæ nigro-virides, flavo bivittatæ et unifasciatæ.

Metallic green: head and chest very thickly punctured: head above depressed on each side; face very convex, with a slight ridge, on each side of which are parallel rather indistinct slightly oblique ridges: mouth red; antennæ black: abdomen at the tip and legs red; thighs black: fore-wings blackish-green, with two short curved yellow stripes, which proceed from the base, and terminate before half the length, the inner one extends to the fore border; a slender slightly waved yellow band extends across the wing at two-thirds of the length: hind-wings grayish; veins black. Length of the body 4 lines; of the wings 10 lines.

a. S. America. Presented by E. Doubleday, Esq.

## O 18. Monecphora semifascia.

Nigra; scutellum et abdomen rufa, hoc subtus nigrum; femora postica apice tibiæque posticæ basi rufa; alæ anticæ rufo bimaculatæ et unifasciatæ.

Black: head and chest shagreened, dull: head above depressed on each side; face very convex, its keel prominent, with distinct

slightly oblique ridges on each side: mouth and scutcheon red: abdomen red, black beneath, except the tip: tips of hind-thighs and hind-shanks at the base red: fore-wings with an interrupted red stripe at one-third, and two red spots at two-thirds of the length, one on the fore border, the other on the hind border: hind-wings almost colourless, brown at the tips and along the hind borders. Length of the body 3 lines; of the wings 8 lines.

a. Venezuela. From Mr. Dyson's collection.

# 5 19. Monecphora angusta, MSS.

Nigra; abdomen apice rufum; pedes rufi, tibiis anticis femoribusque nigro vittatis, tarsis nigris; alæ anticæ basi rufescentes, luteo bifasciatæ.

Black, shining: head and chest finely punctured: head above depressed on each side; face very convex; keel reddish, very slight; ridges on each side rather indistinct: mouth red, with a black tip: breast about the hips and tip of the abdomen red: legs red; thighs and fore-shanks striped with black; feet black: fore-wings black, reddish at the base of the fore border, adorned with two slender luteous bands, one at one-third, the other at two-thirds of the length: hind-wings gray; veins black. Length of the body 3 lines; of the wings  $7\frac{1}{2}$  lines.

a. Georgia. Presented by E. Doubleday, Esq.

## 0 20. Monecphora sanguinipes. /

Cercopis sanguinipes, Germar.

Nigra; abdomen piceum, basi apiceque rufum; pedes rufi; femora piceo varia; alæ anticæ fuscæ.

Black: head and chest shagreened, dull: head above depressed: face convex, very prominent; keel and cross ridges slight: mouth red, with a black tip: abdomen pitchy, red at the base and at the tip: legs red; thighs partly pitchy: fore-wings dark brown; cross-veins very few, occupying only the tips of the wings: hind-wings grayish, brown at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Cape. From M. Dregé's collection.

### 21. Monecphora vittata.

Picea, ferrugineo varia; pectus testaceum; abdomen ferrugineum; pedes testacei; tarsi nigri; alæ anticæ flavæ, angustæ, fusco quadrivittatæ, apice fusco maculatæ.

Pitchy, partly ferruginous: head and chest almost flat, very finely punctured: face prominent, very convex; keel slight; cross ridges oblique, rather indistinct: mouth testaceous, with a black tip: antennæ black; fourth joint tawny: breast testaceous: abdomen ferruginous: legs testaceous; feet and tips of anterior shanks black; hind feet testaceous at the base: fore-wings yellow, long and narrow, with four irregular, partly united brown stripes: a row of angular brown spots along each tip: hind-wings almost colourless, pale brown at the tips and along the hind borders. Length of the body  $3\frac{1}{2}$  lines; of the wings 9 lines.

a. South America. Presented by E. Doubleday, Esq.

### G 22. Monecphora ornata.

Fusca; caput subtus et pectus lutea, hoc nigro maculatum; thorax flavo bifasciatus; abdomen rufum, subtus luteum; pedes lutei, tarsis nigris; alæ anticæ flavo trimaculatæ.

Brown: head and chest slightly shining, very finely punctured: head luteous beneath; face very convex; no keel, but a smooth, flat stripe between the ridges, which are oblique and indistinct: mouth luteous, with a pitchy band and tip: antennæ black; fourth joint tawny, accompanied by a shorter bristle: two broad, bright yellow bands on the chest, one along the fore border, the other near the tip: breast luteous, with a very large transverse subquadrate black spot: abdomen red, luteous beneath: legs luteous; knees, feet, and tips of shanks black: fore-wings adorned with three pale yellow spots; one at the base, nearly round; second long, extending in a slightly oblique direction from the fore border to beyond the middle; third almost round, on the fore border near the tip: hindwings nearly colourless; flaps pale brown; veins brown. Length of the body  $3\frac{1}{2}$  lines; of the wings 10 lines.

a. Brazil.

## 23. Monecphora alboatra.

Nigra; abdomen piceum, basi testaceum; alæ anticæ albo bifasciatæ.

Black, shining: head and fore-chest rugulose: head flat; face slightly convex, not keeled, but quite smooth along a broad space in front; ridges on each side very oblique and indistinct: mouth pitchy, black towards the tip: abdomen pitchy, testaceous at the base: fore-wings adorned with two slender, zigzag, slightly curved white bands, which are interrupted in the middle: hind-wings gray, brown at the tips and along the hind borders; veins black. Length of the body  $3\frac{1}{2}$  lines; of the wings 9 lines.

a. Columbia. From Mr. Turner's collection.

#### O 24. Monecphora trimacula.

Picea; metathorax et pectus fulva; abdomen rufo fasciatum; pedes fulvi; alæ anticæ fuscæ, albo trimaculatæ.

Pitchy, shining: head and chest thinly and finely punctured: disk of the head above much depressed; face very convex, very hairy, not keeled; cross ridges on each side slightly oblique, rather indistinct: mouth and antennæ tawny: chest very convex, with a slight cross furrow near the fore border, and with a very indistinct keel along the back: hind-chest and breast tawny: hind borders of the abdominal segments red: legs tawny: fore-wings brown, darkest along the fore border, with three round white spots; one at the base; the second and third in the disk, at one-third and at two-thirds of the length: hind-wings colourless, very slightly clouded along the hind borders; veins tawny. Length of the body  $3\frac{1}{2}$  lines; of the wings 9 lines.

a. East India.

### 6 25. Monecphora solita.

Viridis; pectus, abdomen et pedes rufa; abdominis latera basi fulva; alæ anticæ fuscæ, luteo unifasciatæ, basi rufæ.

Metallic-green, slightly shining: head and chest very thickly punctured: head above depressed; face purple, very convex, keeled, with distinct, slightly oblique cross ridges on each side: mouth bright red, with a black tip: antennæ black, tawny towards the tips,

reddish at the base: hind-chest, breast, abdomen and legs bright red; abdomen tawny on each side at the base: fore-wings brown, somewhat paler towards the base, which is red, with a slightly oblique, slender, orange band at two-thirds of the length: hind-wings pale brown, almost colourless beneath the fore border, veins brown, bright red at the base. Length of the body 3 lines; of the wings 9 lines.

a, b. Brazil. Presented by John Miers, Esq.
c. Brazil. Presented by J. G. Children, Esq.
d—h. Brazil.

## 26. Monecphora basalis.

Fusca, lata; pectus, abdomen et pedes rufa; alæ anticæ fuscæ, fulvo bifasciatæ.

Broad, brown, shining: head and chest very thickly punctured: head above depressed on each side; face very convex, with a very prominent keel; cross ridges on each side very distinct, slightly oblique; epistoma and mouth red, the former compressed: chest with some depressions on each side near the fore border: breast, hind-chest, abdomen and legs red: fore-wings brown, with two slender tawny bands; the first at one-third of the length, slightly interrupted; the second at two-thirds of the length, much interrupted: hind-wings slightly brown, almost colourless towards the base; veins brown, red at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 8 lines.

a. Jamaica. From Mr. Gosse's collection.

## 27. Monecphora neglecta.

Fusca; abdomen testaceum; pedes fulvi.

Brown, slightly shining: head above and chest thickly punctured, somewhat depressed; face very convex, hairy; keel ferruginous; cross ridges on each side distinct, oblique; epistoma ferruginous, compressed: mouth black, testaceous towards the base: hind-chest and abdomen testaceous: legs dark tawny; tips of feet black: fore-wings brown: hind-wings almost colourless, pale brown at the tips and along the hind borders; veins brown, red at the base. Length of the body 4 lines; of the wings 8 lines.

a. Jamaica. From Mr. Gosse's collection.

### 28. Monecphora incompleta.

Fusca; caput fulvo fasciatum; pectus testaceum, nigro maculatum; pedes fulvi; alæ anticæ fulvo bimaculatæ et bivittatæ.

Pale brown, shining: head and chest thickly punctured: head flat, tawny along the fore border on each side between the eyes and the face; face very convex, keeled; cross-ridges on each side distinct, slightly oblique: epistoma and mouth dark tawny: hind-chest and breast pale testaceous, the latter with a large transverse subquadrate black spot: legs dark tawny: fore-wings pale brown; fore border and hind border pale yellow along two-thirds of the length from the base; a pale yellow spot on each border nearer the tip: hind-wings almost colourless; veins brown. Length of the body 3 lines; of the wings 8 lines.

a. Parà. From Mr. Stevens' collection.

### 29. Monecphora demissa.

Nigro-ænea; pectus et abdomen testacea, hoc piceo bimaculatum; pedes nigri; femora postica testacea; alæ anticæ fuscæ, fulvo quadrimaculatæ.

Æneous-black, slightly shining: head and chest thickly punctured: head above depressed on each side; face brown, convex; keel prominent; cross-ridges on each side distinct, hardly oblique: mouth tawny with a pitchy tip: chest almost flat: hind-chest, breast and abdomen testaceous; breast with a large piceous spot on each side: legs black; hind thighs testaceous; hind-shanks and hind-feet ferruginous towards the base: fore-wings brown, with three tawny spots at one-third of the length, forming an interrupted band, the two hinder spots small; a tawny spot on the fore border at two-thirds of the length: hind-wings almost colourless, pale brown at the tips and along the hind borders; veins brown, tawny at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 8 lines.

a. Venezuela. From Mr. Dyson's collection.

### 32. Monecphora erythrostena.

Ferruginea; pectus rufum, nigro fasciatum; abdomen rufum subtus nigrum; pedes rufi, tibiis anterioribus tarsisque nigris; alæ anticæ nigræ, ad costam basi rufæ.

Ferruginous, shining: head and chest punctured: head above depressed on each side; face smooth, convex, very prominent; no keel; ridges on each side almost obsolete; fore part forming a concave conical compartment: mouth red with a black tip: breast red, with a black band: abdomen red, black beneath excepting the tip: legs red; feet and anterior shanks black; tips of hind shanks black; hind-feet red at the base: fore-wings black, red along the fore border near the base: hind-wings grayish; veins black. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Cape. From M. Drége's collection.

33. Monecphora? colon.

Cercopis colon, Hoff. Germ. Mag. Ent. iv. 429. Brazil.

34. Monecphora? Petrificata.

Cercopis petrificata, Germ. Mag. Ent. iv. 45, 16. Brazil.

35. Monecphora? Terrea.

Cercopis terrea, Germ. Mag. Ent. iv. 46, 17. Brazil.

36. Monecphora? Lineola.

Cercopis lineola, Fabr. Syst. Rhyn. 94, 33. Germ. Mag. Ent. iv. 41, 6.

#### O Genus 5. SPHENORHINA.

Sphenorhina, Amyot et Serv. Hist. Nat. Hém. 562, 464.

6 Cicada, p., Linn., Deg.

O Cercopis, p., Fabr., Germ., St. Farg. et Serv., Burm., Blanch., Guér.

## 1. SPHENORHINA LINEOLATA.

Sphenorhina lineolata, Amyot et Serv. Hist. Nat. Hém. 563, 1, pl. 10, f. 7.

S. America?

# 2. Sphenorhina marginata.

Cercopis marginata, Fabr. Ent. Syst. iv. 48, 2. Syst. Rhyn. 90, 10. a. Brazil.

### 3. Sphenorhina rufivaria.

Nigra, rufo vittata et marginata; abdominis dorsum rufum; pedes rufi, femoribus basi tarsisque nigris; alæ anticæ fuscæ, rufo bivittatæ, nigro semi-marginatæ.

Black, shining: crown of the head with a bright red stripe extending to the face, which is bright red, and has on each side a pitchy disk, with about twelve oblique furrows: feelers pale towards the tips: middle stripe and border of the chest bright red: disk of the back of the abdomen dark red: legs red; thighs towards the base and at the tips, hips, feet, and tips of shanks black: forewings brown, narrow, black along the borders from the middle to the tips; the black is accompanied by a red stripe, which, towards the base, occupies the fore border, and diverges thereunto from the hind border: hind-wings brown; veins by Length of the body 5—6 lines; of the wings 16—18 lines.

a, b. Brazil.

### 4. SPHENORHINA COMPRESSA.

Ocercopis compressa, St. Farg. et Serv. Enc. Méth. x. 606, 9. Stoll, Cic. pl. 21, f. 112.

a. Brazil. Presented by J. G. Children, Esq.

b, c. Brazil.

### O 5. SPHENORHINA LITURATA?

Cercopis liturata? St. Farg. et Serv. Enc. Méth. x. 606, 9.

Ænea; caput anticum, pectus, abdomen et pedes nigra; pectus rufo maculatum; alæ anticæ rufo trivittatæ.

Brassy, thickly punctured: head black in front; keel very prominent, and forming in front an almost right angle, with transverse furrows on each side; mouth red at the base: breast and abdomen black, the former red about the hips: oviduct red: legs black; knees and trochanters red: fore-wings black, very thickly and minutely punctured, covered with gilded down, adorned with three red stripes; first near the fore border, joining the second near the tip of the wing; second and third accompanying the longitudinal veins; second with a short fork near the base: hind-wings brown; veins black. Length of the body  $5\frac{1}{2}$  lines; of the wings 15 lines.

a. Brazil. b. ——?

# 6. Sphenorhina venosa.

Nigra; scutelli latera et metathorax picea; abdomen basi rufescens; alæ anticæ nigro-piceæ rufo-venosæ.

Black, almost dull: head shining, keeled and very angular in front, with transverse furrows: fore-chest very thickly punctured: hind-chest and sides of the scutcheon pitchy: abdomen reddish at the base, somewhat dilated on each side: fore-wings piceous black, red along the veins which are also red: hind-wings dark brown; veins black. Length of the body 6 lines; of the wings 15 lines.

a. - ? From Mr. Argent's collection.

### 7. SPHENORHINA ELLIPTICA.

Nigra, rufo varia; alæ anticæ rufæ nigro marginatæ et bimaculatæ.

Black, shining: head in front bright red and forming an angular and very acute keel: hinder sides of the fore-chest, sides and tip of the scutcheon and hind-chest bright red: oviduct and part of the breast red: fore-wings black; disk and part of the base bright

red, including two large oblong black spots, one elliptical, the other half-elliptical: hind-wings dark brown, with two or three almost colourless streaks in the areolets; veins black, bright red at the base. Length of the body  $5\frac{1}{2}$  lines; of the wings 16 lines.

a, b. Venezula. From Mr. Dyson's collection.

#### 8. SPHENORHINA CIRCULATA.

Cercopis circulatus, Guér. Icon. Règn. Anim. Texte, iii. 368.

a. Columbia. Presented by A. White, Esq.

### 9. SPHENORHINA LATIFASCIA.

Nigra; thorax rufo fasciatus; scutellum flavum; abdomen basi rufescens; alæ anticæ flavo bifasciatæ.

Black, shining: front of the head keeled and almost rectangular, with transverse furrows on each side; mouth red at the base: fore-chest with a broad red band along the fore border: scutcheon yellow excepting the base: abdomen at the base and part of the breast reddish: fore-wings with two bright yellow bands; first broad, near the base; second at two-thirds of the length, much narrower than the first, tapering towards the hind border: hind-wings dark brown, colourless at the base; veins black, yellow towards the base. Length of the body  $5\frac{1}{2}-6\frac{1}{2}$  lines; of the wings 16-17 lines.

a, b. Columbia. From Mr. Turner's collection.

### 10. SPHENORHINA RUBRA.

O Cicada rubra, Linn. Syst. Nat. ii. 711, 45. Deg. Ins. iii. 224, 20, pl. 33, f. 8. Stoll. Cic. pl. 2, f. 10.

Cercopis cruentata, Fab. Ent. Syst. iv. 49, 10. Syst. Rhyn. 91, 14. Cercopis rubra, Germ. Mag. Ent. iv. 41, 5. Burm. Handb. Ent. ii. 1, 125, 3. Blanch. Hist. Nat. Ins. iii. 187, 4. Hém. pl. 14, f. 3.

Cercopis tricolor? Guér. Icon. Règ. An. Texte, 368.
 Sphenorhina rubra, Amyot et Serv. Hist. Nat. Hém. 563, 2.

a. Lima. Presented by the Entomological Club.
b, c. Brazil. Presented by John Miers, Esq.
d. Brazil. Presented by J. G. Children, Esq.

e-j. Brazil.

## O 11. SPHENORHINA QUADRIGUTTATA.

Picea; abdomen supra rufum; pedes nigri; tarsi rufi; alæ anticæ luteo bimaculatæ.

Pitchy, shining: head with transverse furrows and three keels in front: chest finely rugulose, fore-chest slightly impressed on each side in front, with an indistinct middle ridge; abdomen red above: legs black; knees and feet bright red; hind-shanks red towards the base: fore-wings adorned with two round luteous spots at two-thirds of the length; one on the fore border, larger than the other, which is near the hind border: hind-wings gray, brown at the tips and along the hind borders. Length of the body  $4\frac{1}{2}$ —5 lines; of the wings 14—15 lines.

a.—Honduras. From Mr. Dyson's collection.

### 2. SPHENORHINA SUFFUSA.

Rufa; pectus piceum; abdomen subtus nigrum; alæ anticæ subfuscæ, luteo bimaculatæ et univittatæ.

Red, shining: head and chest thickly punctured, slightly shining: head depressed on each side of the middle keel; face slightly compressed, with a very prominent keel, having on each side distinct, slightly curved ridges: tip of the mouth pitchy: chest with an angular depression on each side near the fore border: breast pitchy: abdomen mostly black beneath: fore-wings pale brown, with a large oblong orange spot on the fore border at the base; beneath this and a little further from the base there is an oblique orange mark, and nearer the tip an interrupted orange stripe, which does not reach the hind border: hind-wings lurid; veins brown, bright red at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 13 lines.

.a. ----?

### D 13. SPHENORHINA NOTATA.

Ferruginea; pectus et abdomen rufa; pedes nigri; femora rufa; tibiæ posticæ fulvæ; alæ anticæ subfuscæ, rufo trinotatæ.

Ferruginous, shining: head and chest rather roughly punctured: head depressed on the disk, pitchy on each side in front;

face compressed, red, black towards the antennæ, with a very prominent keel, which has strongly marked ridges on each side: mouth, hind-chest, breast, and abdomen red: legs black; thighs red; hind-shanks tawny, with black tips: fore-wings pale brown, with a short red stripe along the hind border from the base; an oblique red mark extends from the fore border to the disk at one-third of the length, and an upright red band, which is narrowest in the middle traverses the wing at two-thirds of the length: hind-wings colour-less, pale brown at the tips and along the hind borders; veins tawny, sed at the base. Length of the body 4 lines; of the wings 12 lines.

a. - ? From Mr. Shuckard's collection.

### 14. Sphenorhina unifascia.

Rufa; pectus, abdomen et pedes nigra; pedes postici ferruginei; alæ anticæ nigro unifasciatæ.

Red, shining: head and chest rather roughly punctured: head above depressed on each side of the slight keel; face much compressed, almost rectangular; keel very thin, with distinct oblique cross-ridges on each side: mouth pitchy: breast, abdomen and legs black; hind legs ferruginous: fore-wings darker towards the tips; a black band at one-third of the length widening towards the hind border, and extending along the fore border towards the base of the wing: hind-wings slightly gray, pale brown at the tips and along the hind borders; veins brown, red at the base. Length of the body 3 lines; of the wings 9 lines.

a. ——? From Mr. Argent's collection.

## 15. SPHENORHINA PUNCTIGERA?

Cercopis punctigera? Hoffmansegg, Germ. Mag. Ent. iv. 42, 8.

Nigra; caput fulvo maculatum; thorax luteo fasciatus.

Black, shining: front of the head depressed, with a large transverse subquadrate tawny spot; face slightly compressed, luteous towards the mouth, not angular; keel distinct, accompanied on each side by a very slight keel, beyond which there are distinct cross-ridges: mouth black, tawny at the base: chest roughly punctured, with a slight longitudinal keel; a luteous band along the

fore border has a semiquadrate notch on each side: breast pitchy, testaceous about the hips: abdomen red: a broad bright luteous band on each of the fore-thighs; middle-thighs tawny with black tips; hind-thighs pale tawny; hind-shanks pitchy: fore-wings brown, with a short, sometimes interrupted luteous stripe along the hind border from the base; opposite this there is a luteous spot on the fore border, and one on the disk beyond; two more luteous spots at two-thirds of the length, one on the fore border, the other near the hind-border: hind-wings slightly gray, pale brown at the tips and along the hind border; veins brown, luteous at the base. Length of the body 3 lines; of the wings 9 lines.

a, b. Parà. From Mr. Stevens' collection.

## 2 16. SPHENORHINA LINEATA.

Testacea; abdomen rufescens; pedes lutei; tarsi nigri; alæ anticæ fuscæ, luteo bifasciatæ et bivittatæ, ad costam fulvæ.

Testaceous, shining: head and chest finely punctured: head above depressed on each side of the slight keel; face luteous, much compressed, almost rectangular; keel distinct; cross-ridges on each side very strongly marked: mouth pitchy, testaceous at the base: chest slightly impressed on each side in front: abdomen reddish; appendages tawny: legs luteous; feet and tips of the shanks black; hind-feet tawny at the base: fore-wings pale brown; fore border tawny; two luteous bands at the base; beyond these two luteous stripes extend along the disk to the tips: hind-wings grayish, slightly tinged with brown at the tips and along the hind borders; veins brown, luteous at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 8 lines.

a. Honduras. From Mr. Dyson's collection.

## 717. SPHENORHINA STELLATA.

Nigra; scutelli latera rufa; abdominis segmentorum margines postici rufescentes; alæ anticæ nigro-fuscæ, rufo 5·maculatæ.

Black, shining: head and chest thickly punctured, almost flat, slightly brassy on each side; head above with a slight brassy keel; face bluish-black, hardly compressed; keel brassy; cross-ridge rather indistinct: feelers ferruginous: scutcheon red on each side: abdomen above pitchy; hind borders of the segments reddish:

thighs and hind-feet at the base, knees, and tips of hind-shanks red: fore-wings brownish-black, thickly punctured, covered with gilded down, adorned with five bright red dots; three towards the base; two nearer the tips: hind-wings dark brown; veins black, bright red at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 11 lines.

a. Parà. Presented by Gordon Graham, Esq.

### O 18. SPHENORHINA METALLICA.

Viridis; pectus et abdomen nigra; pedes picei; tarsi nigri; alæ anticæ viridi-fuscæ.

Metallic-green: head and chest thickly punctured, slightly shining, almost flat: head above depressed on each side of the slight keel; face compressed, forming an almost right angle; keel prominent; cross ridges on each side slight: mouth black, reddish towards the base: antennæ black: breast and abdomen black, shining: legs pitchy; feet black: fore-wings dark brown, with a slight green tinge: hind-wings grayish, with a slight brown tinge at the tips and along the hind borders, brown at the base; veins black, reddish at the base. Length of the body 3 lines; of the wings 8 lines.

a. ——? From Mr. Birch's collection.
b. ——?

### <sup>©</sup> 19. Sphenorhina brevis.

Rufa; scutellum apice piceum; pedes nigri; tibiæ anteriores rufæ; alæ anticæ macula apiceque fuscis.

Red, shining: head and chest very thinly punctured, almost smooth: head above slightly concave; face compressed, hardly angular, with a black band between the antennæ; keel prominent; cross ridges on each side rather indistinct; tip of the mouth black: tip of the scutcheon pitchy: legs black; anterior shanks red, with black tips: fore-wings red with a very large brown discoidal spot which extends to the fore border, and communicates with the brown which occupies the tips, and thence forms a stripe along part of the hind border; it also accompanies a longitudinal vein to the base of the wing: hind-wings slightly gray; veins black, red at the base. Length of the body 2 lines; of the wings 6 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

#### 20. SPHENORHINA? SANGUINEA.

Cercopis sanguinea, Fab. Syst. Rhyn. 89, 4. Germ. Mag. Ent. iv. 41, 7.

South America.

- 21. Sphenorhina festa.
- Cercopis festa, Germ. Mag. Ent. iv. 40, 3. Brazil.
  - 22. SPHENORHINA SORORIA.
- O Cercopis sororia, Germ. Mag. Ent. iv. 41, 4. Brazil.
  - © 23. SPHENORHINA MELANOPTERA.
- Cercopis melanoptera, Germ. Mag. Ent. iv. 43, 10. Brazil.
  - 24. Sphenorhina hæmatina?
- Cercopis hæmatina, Germ. Mag. Ent. iv. 39, 1.

### 25. SPHENORHINA OCELLATA.

Rufa vel testacea; pectus, abdomen et pedes nigra; alæ longæ, angustæ; alæ posticæ fuscæ, basi rufæ.

Bright red: head flat above; front prominent, with three distinct keels, transversely furrowed: mouth black: chest very minutely punctured; a rim on each side of the scutcheon: breast, abdomen, and legs black: wings rather long and narrow: hindwings brown, red at the base; veins black. Length of the body  $4\frac{1}{2}$  lines; of the wings 15 lines.

- O Var. β. Head and chest testaceous.
- a. Venezuela. From Mr. Stevens' collection.
- b. ——?

Rufa; abdomen supra nigrum; pedes nigro fasciati; tarsi postici albi; alæ anticæ fulvæ, macula apicali rufa nigro circumdata.

Red, shining: head and chest roughly punctured: head above concave; face extremely compressed, forming a right angle; keel very thin; cross ridges on each side rather indistinct; epistoma compressed: mouth black, red towards the base: antennæ black; fourth joint tawny: chest much depressed on each side in front: abdomen black above, red at the base and at the tip: tips of the thighs, of the shanks and of the feet black; hind-feet white, with black tips: forewings tawny, long and narrow; near each tip a large round red spot surrounded by a black circle: hind-wings almost colourless, pale brown at the tips and along the hind border; veins black, yellow at the base. Length of the body  $4-4\frac{1}{2}$  lines; of the wings 12-13 lines.

a. Brazil. Presented by the Entomological Club.b. South America. Presented by E. Doubleday, Esq.

### 26. SPHENORHINA PARALLELA.

Rufa; pectus nigro fasciatum; abdomen nigrum; femora apice, tibiæ tarsique nigra; alæ anticæ fuscæ, rufo trivittatæ.

Bright red, shining: head and chest very finely punctured; head above depressed; face much compressed, forming a right angle, having a flat black lanceolate compartment between the antennæ; keel very thin; a cross ridge on each side, rather indistinct; epistoma compressed: mouth and antennæ black; fourth joint tawny: chest depressed on each side in front: breast with a black band across the middle-hips: abdomen black, red at the base and at the tip: shanks, feet, and tips of the thighs black: fore-wings brown, long and narrow, adorned with three red stripes, which are united at the tips; the middle one extends to the base, which it wholly occupies: hind-wings almost colourless, pale brown at the tips and along the hind borders; veins black, bright red at the base. Length of the body 3 lines; of the wings 10 lines.

a. South America. Presented by E. Doubleday, Esq.

### O 27. SPHENORHINA CONTIGUA.

Nigra; abdomen rufum; pedes picei; alæ anticæ fuscæ, rufo bimaculatæ et unifasciatæ.

Black, shining: head rather long, somewhat coneave above; face produced, conical, very hairy, quite smooth; first joint of the mouth red: fourth joint of the antennæ pale: chest roughly punctured, rather long and narrow in front, where there are two transverse furrows; three slight longitudinal furrows between the fore-wings: abdomen bright red, with a black tip: legs pitchy: fore-wings dark brown, with a slightly oblique red band near the base; two red spots at two-thirds of the length, one extending from the fore border to the disk, the other very small, near the hind border; hind-wings almost colourless, very slightly tinged with brown at the tips and along the hind borders; veins black, red at the base. Length of the body 4 lines; of the wings 9 lines.

a, b. North India. From Mr. Warwick's collection.

## 28. SPHENORHINA INTERMEDIA.

Nigra; abdomen rufum; alæ anticæ angustæ, flavo unifasciatæ, rufo unimaculatæ.

Black, shining: head rather long, depressed above; face produced, conical, compressed, almost acute at the tip, with longitudinal ridges on each side, having a long, narrow, flat, smooth, pitchy compartment in front: mouth pitchy: chest with an indistinct cross furrow in front: abdomen bright red with a black tip: fore-wings narrow, with a broad, pale yellow, slightly oblique band near the base, and a red spot near the fore border at two-thirds of the length: hind-wings almost colourless, pale brown at the tips and along the hind border; veins tawny, red at the base, brown towards the tips. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a. North India. From Mr. Warwick's collection.

### 29. SPHENORHINA PROXIMA.

Nigra; abdomen supra rufum; alæ anticæ fuscæ, albido bifasciatæ.

Black, shining: head and chest finely punctured: head rather long, slightly concave above; face produced, conical, smooth, very

hairy: fourth joint of the antennæ tawny: chest rather long and narrow in front, with an indistinct cross furrow: abdomen red, black towards the tip and beneath: hind-hips reddish: fore-wings dark brown, rather narrow, with two whitish, very slightly oblique bands; one broad, at one-third of the length, the other narrow, interrupted, and not joining the hind border, at two-thirds of the length: hind-wings almost colourless, pale brown at the tips and along the hind borders; veins black, pale yellow at the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

a. North India. From Mr. Warwick's collection.

## 30. SPHENORHINA PRODUCTA.

Nigra; scutelli latera, abdomen et pedes rufa; alæ anticæ rufæ, apice nigræ.

Black, shining: head depressed on each side above; face much produced, conical, smooth, hairy above, ferruginous at the tip, whence a broad ferruginous stripe extends to the epistoma, which has an elliptical concave compartment adjoining the mouth; the latter is red with a black tip: feelers pitchy; fourth joint pale: chest finely punctured, clothed with short pale hairs, depressed on each side in front: sides and tip of the scutcheon, hind-chest, abdomen and legs bright red; tips of the shanks and of the feet black: fore-wings bright red with black tips, narrow towards the base; hindwings colourless; veins tawny, bright red at the base and along the fore border. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

*a*—*j*. ——?

### 31. Sphenorhina transiens.

Ferruginea; caput nigrum; scutelli latera et abdomen testacea; femora tibiæque picea; alæ anticæ fuscæ.

Ferruginous, shining: head and chest minutely punctured, covered with tawny down: head black, depressed on each side above, hardly concave along the hind border, semicircular in front; face convex, prominent, keeled, spindle-shaped, with about ten oblique cross ridges on each side: sides of the scutcheon and abdomen testaceous: thighs and feet mostly pitchy: fore-wings brown: hindwings pale gray; veins black, tawny at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 7 lines.

a. Brazil. Presented by E. Doubleday, Esq.

### 5 32. SPHENORHINA RUBICUNDA.

Rufo-fulva; pectus piceo fasciatum; abdominis latera ad apicem, tibiæ anteriores tarsique picea; alæ anticæ rufæ, basi luteæ.

Reddish tawny, shining: head impressed above, much narrower than the chest, straight along the hind border, forming a slightly obtuse angle in front, broader than long; face convex, prominent, smooth, hardly compressed, slightly keeled, forming a right angle in front where the keel is divided; epistoma tawny, keeled: mouth pitchy, ferruginous towards the base: feelers pitchy, with pale tips: chest roughly punctured: a pitchy stripe across the breast between the fore-hips and the middle-hips: abdomen pitchy on each side towards the tip: feet and anterior shanks pitchy: fore-wings bright red, partly luteous towards the base, almost elliptical, hardly narrower towards the tips: hind-wings pale gray, slightly tinged with brown at the base, at the tips and along the hind border; veins black, red at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Port Natal. From M. Gueinzius's collection.

### O Subtribe 5. APHROPHORIDES.

Aphropho.ides, Amyot et Serv. Hist. Nat. Hém. 563.

## Genus 1. APHROPHORA.

Aphrophora, Germar, Leon Duf., Burm., Ramb., Blanch., Amyot et Serv.

CCicada, p., Linn., Deg., Geoffr.

Cercopis, p., Fabr., Panz., Germ., Fall.

Q Tettigonia, p. Tign., Oliv., Curt.

## 1. Aphrophora spumaria.

Aphrophora spumaria, Germ. Mag. Ent. iv. 50, 1. Burm. Handb. Ent. ii. 7, 121, 1. Duf. Rech. Hém. 105, 1. Ramb. Faun. And. ii. 205. Blanch. Hist. Nat. Ins. 189, 2, pl. 14, f. 5. Amyot et Serv. Hist. Hem. 566, 1.

O Cicada spumaria, Linn. Syst. Nat. 708, 24. Faun. Suec. 881.

Gmel. Ed. Syst. Nat. i. 4, 2109, 146.

Cicada spumaria Salicis, Deg. Ins. iii. 180, 2.

O Cercopis spumaria, Fabr. Sp. Ins. ii. 329, 7. Mant. Ins. ii. 274, 10. Ent. Syst. iv. 51, 18. Syst. Rhyn. 95, 35.

Cercopis bifasciata, Fabr. Syst. Rhyn. 98, 57. Panz. Faun. Germ.

Aphrophora salicina, L. Duf. Rech. Hém. 101, 2. Amyot et Serv. Hist. Nat. Hém. 566, 2.

Tettigonia spumaria, Tign. Hist. Nat. Ins. iv. 153, pl. 6, f. 2. Tettigonia salicina, Tign. Hist. Nat. Ins. iv. 157.

O Cercopis Alni, Fall. Cic. ii. 2. Act. Holm. 1805, 240, 2. Zett. Ins. Lapp. 514, 1.

Aphrophora, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 190, 421. Chalea, Amyot. Ann. Soc. Ent. Fr. 2me Série, v. 190, 419.

a-g. England.

h. France.

i—l. ——? Presented by J. G. Children, Esq.

### 2. APHROPHORA CORTICEA.

Aphrophora corticea, Germ. Mag. Ent. iv. 50, 2. Burm. Handb. Ent. ii. 1, 122, 2.

© Cercopis coriacea, Fall. Cic. 14, 4.

Spilaphria, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 190, 420. Europe.

### 3. Aphrophora siccifolia.

Testacea; scutellum apice flavum; alæ anticæ fuscæ, testaceo bifasciatæ.

Testaceous, shining: head and chest pubescent, finely punctured: head above flat, almost conical, with two pitchy semicircular marks in the disk, one in front, the other between the eyelets; face convex, very distinctly keeled, black towards the tip, with about twelve distinct very slightly oblique ridges on each side; epistoma black, testaceous towards the tip: mouth ferruginous, black towards the tip: chest very slightly wrinkled; scutcheon darker near the tip, which is yellow: fore-wings brown, with two broad, irregular, diffused testaceous bands, narrow towards the tips: hind-wings pale brown, almost colourless beneath the fore border for three-fourths of the length from the base; veins tawny, yellow at the base. Length of the body 6 lines; of the wings 16 lines.

D Var. β. Fore-wings tawny towards the tips.

a. West Africa. Presented by Sir E. Belcher.

b. ——?

## 4. Aphrophora occidentis.

Testacea; caput piceo vittatum; thorax piceo quadripunctatus; scutellum nigro-maculatum, apice flavum; pectus piceo bimaculatum; pedes fulvi; alæ anticæ testaceo fuscæ, ad costam obliquè bivittatæ.

Testaceous, shining: head and chest roughly punctured, covered with tawny down: head flat, conical, concave along the hind border, with a broad pitchy stripe; its length a little more than half its breadth; face very convex, almost oval, slightly keeled, pitchy towards the epistoma, with about fourteen very slightly oblique cross ridges; epistoma pitchy, slightly keeled: mouth tawny with a pitchy tip, almost reaching the middle hips: feelers tawny: chest very slightly convex, with four large pitchy punctures near the fore border; a black spot near the tip of the scutcheon which is yellow: breast with a large pitchy spot on each side; tip of the abdomen pitchy: legs tawny, tips of the feet black: fore-wings testaceous-brown, slightly mottled, darkest along the fore borders and at the tips, with two short oblique stripes near the fore border: hindwings almost colourless, with brown tips, indistinctly brown along the hind borders; veins black, tawny at the base. Length of the body  $5\frac{1}{2}$  lines; of the wings 13 lines.

a. West Coast of America. Presented by Capt. Wood and Lieut. Wood.

### O 5. APHROPHORA DIMINUTA.

Testacea; caput piceo-vittatum; thorax piceo maculatus et fasciatus; pedes ferruginei; alæ anticæ ferrugineæ, fusiformes, fulvo obliquè trivittatæ.

Testaceous, shining: head and chest thickly punctured, covered with tawny down: head flat, slightly concave along the hind border, almost conical in front, with an indistinct cross furrow, and with a pitchy stripe, which is almost divided lengthwise; its length almost half its breadth; face very convex, almost oval, slightly keeled, pitchy in front, with thirteen shallow, very slightly oblique cross ridges; epistoma pitchy, slightly keeled: mouth tawny, black towards the tip, reaching the middle hips: chest very slightly convex, with a pitchy spot and some large, shallow impressions near the fore border; a pitchy band near the tip of the scutcheon: upper abdominal appendages black: legs ferruginous; a yellow spot on each knee; tips of the feet pitchy: fore-wings fer-

ruginous, convex along the fore border, almost spindle-shaped, with three indistinct oblique tawny bands; the first near the base, broad and diffuse; the second shortened in front; the third interrupted: hind-wings colourless, pale brown at the tips and along the hind border; veins brown, yellow at the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 10 lines.

a. West Coast of America. Presented by Capt. Wood and Lieut. Wood.

### 6. APHROPHORA RUFIVENTRIS.

Ferruginea; pectoris discus niger; abdomen rufum; pedes fulvi; alæ anticæ piceo ad costam trimaculatæ.

Head wanting: chest pale ferruginous, thickly and minutely punctured, covered with tawny down: disk of the breast black; abdomen red: legs tawny: fore-wings pale ferruginous, thickly covered with tawny down, with three pitchy marks on the fore border; the second forming a band: hind-wings almost colourless, pale brown at the tips and along the hind borders; veins tawny, darker towards the tips. Length of the body 4 lines; of the wings 9 lines.

a. ——?

## 7. Aphrophora sigillifera.

Testacea, piceo varia, flavo vittata; facies ferruginea, piceo varia, flavo vittata et bifasciata; pectus nigro fasciatum; abdomen rufo-luteum; pedes ferruginei, flavo maculati; alæ anticæ luridæ, ad costam fuscæ, albo maculatæ.

Testaceous, shining: head and chest flat, with a slight yellow keel, roughly punctured, thinly covered with tawny down: head above short, mostly pitchy, slightly concave on the hind border, rather more convex in front; its length less than one-fourth of its breadth; face ferruginous, partly pitchy, slightly convex, with a very narrow yellow stripe, which is most distinct towards the epistoma, and is there traversed by two slightly curved yellow bands, one large, the other shorter and narrower; on each side are about ten oblique, slightly curved cross ridges: mouth ferruginous with a pitchy tip: chest partly pitchy and slightly impressed on each side in front: breast with a short, broad, black band between the forelegs and the middle-legs: abdomen luteous, reddish on each side

and beneath: legs ferruginous, spotted with yellow; hind-thighs yellow: fore-wings lurid, thickly punctured, narrow and conical towards the tips which are almost pointed, brownish along part of the fore border on each side of a large subquadrate whitish spot, which is in the middle: hind-wings almost colourless: veins black, tawny at the base. Length of the body 3 lines; of the wings 7 lines.

a. North India. From Mr. Warwick's collection.

## 8. Aphrophora compacta.

Viridis; thorax anticè luteus; scutellum flavum, apice nigrum; abdomen nigrum, basi luteum; pedes nigri; alæ anticæ ferrugineæ, maculis duabus limpidis.

Green, shining: head luteous; face black, with a very indistinct keel; cross ridges on each side very distinct between the eyes, gradually disappearing from thence to the epistoma: mouth pitchy: antennæ black; fourth joint pale: chest slightly rugulose, luteous in front; scutcheon yellow, transversely striated, with a black tip; abdomen black, luteous towards the base: oviduct ferruginous: legs black, stout; knees tawny: fore-wings ferruginous, with two large almost colourless spots in the disk, rather broad at the tips; hind border black along more than half the length from the base: hind-wings colourless; veins black, pale yellow towards the base. Length of the body  $2\frac{3}{4}$  lines; of the wings 8 lines.

a. Van Dieman's Land. Presented by the Rev. T. Ewing.b. Van Dieman's Land. Presented by R. Butler, Esq.

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### 9. Aphrophora carixia.

Aphrophora carixia, White, MSS.

Ferruginea; abdominis discus piceus; pedes fulvi; alæ anticæ fulvæ, posticæ cinereæ.

Pale ferruginous, shining: head and chest roughly punctured, with a very slight keel: disk of the head depressed on each side; face very convex; furrows on each side oblique and punctured: back of the abdomen pitchy, excepting the sides and hind borders of the segments: legs tawny: fore-wings tawny, thickly and rather roughly punctured: hind-wings gray; veins black, tawny towards the base. Length of the body 3 lines; of the wings 6 lines.

a. ——? Presented by J. G. Children, Esq.

10. Aphrophora bifrons.

Fulvo-viridis; facies scutellique latera nigra; pectoris discus piceus; abdomen ferrugineum apice nigrum; pedes fulvi, nigro fasciati; alæ anticæ ferrugineæ, albo binotatæ.

Very nearly allied to A. compacta. Head and chest transversely rugulose: head tawny; front with a keel; face black with eight tawny slightly oblique ridges on each side: chest green, tawny in front; scutcheon with a black border on each side, much attenuated towards the tip, more than half the length of the abdomen: disk of the breast pitchy: abdomen ferruginous, black towards the tip: legs tawny, with black bands; fore-wings ferruginous with a short white band before the middle, and with a slight white streak near the fore border at two-thirds of the length: hind-wings colourless; veins tawny. Length of the body  $2\frac{1}{2}$  lines; of the wings  $6\frac{1}{2}$  lines.

a. New Holland. Presented by the Entomological Club.

#### 11. APHROPHORA? GOUDOTII.

Aphrophora Goudotii, Benn. Proc. Zool. Soc. Lond. 1833, 12.

#### 12. APHROPHORA? FLAVICEPS.

Aphrophora? flaviceps, Guér. Icon. Règ. An. Texte, 366. Madagascar.

#### 13. Aphrophora? Ornata.

Aphrophora ornata, Guér. Icon. Règ. An. Texte, 370. Parà.

## Genus 2. PTYELUS.

Ptyelus, St. Farg. et Serv. Enc. Méth. x., Amyot et Serv. Hist. Nat. Hém. 566.

Cicada, p., Linn., Stoll, Deg., Geoff.

Tettigonia, p., Fabr.

U Cercopis, p., Fabr., Schr., Panz., Blanch.

Aphrophora, p., Germ., Burm.

#### 1. PTYELUS FLAVESCENS.

Tettigonia flavescens, Fabr. Ent. Syst. iv. 24, 30.
Cercopis flavescens, Fabr. Syst. Rhyn. 88, 1.

a. Port Natal. From M. Gueinzius' collection.
b, c. Port Natal. From Mr. Tucker's collection.
d, e. W. Africa? From Mr. Carter's collection.

#### O 2. PTYELUS CONFLUENS.

Testaceus, nigro varius; alæ anticæ confertim nigro maculatæ.

Very nearly allied to *P. flavescens*, but distinguished by the black marks on the head and on the chest, and by the more numerous black marks on the fore-wings. Testaceous, shining, minutely punctured: head black along the hind border, and with a black, triangular spot on the fore border; face with a black streak in the middle, and with a black spot on each side, between which and the eye there are three black spots: chest with a curved band of black spots near the fore border; scutcheon with three black spots: three black spots on each side of the breast: a black spot on each side of the anterior shanks and of the fore-thighs: fore-wings with numerous irregular black marks of various size: hind-wings colourless; veins pale straw-colour. Length of the body 7—9 lines; of the wings 18—22 lines.

a-c. Congo. Presented by Sir J. Richardson.

## 3. PTYELUS GROSSUS.

Cercopis grossa, Fabr. Ent. Syst. iv. 47, 1. Syst. Rhyn. 89, 4.

a. South Africa. Presented by Dr. A. Smith. b. W. Africa? From Mr. Carter's collection.

c, d. Port Natal. From M. Gueinzius' collection.

e, f. Cape.

#### 4. PTYELUS OLIVACEUS?

Tettigonia olivacea? Fabr. Ent. Syst. iv. 25131. Cercopis olivacea? Fabr, Syst. Rhyn. 89, 2.

Viridis; thorax piceo varius; femora antica et tibiæ anteriores nigro fasciatæ; alæ anticæ piceo maculatæ.

Dingy green, shining: head and chest very minutely punctured: head above depressed, with a black spot on each side between

the eye and the eyelet; face convex, not keeled, but with a very slightly concave furrow; this is accompanied by a black stripe, which extends from the crown, and traverses a broad black band between the antennæ; about eighteen oblique rather indistinct ridges, and two black dots beyond them on each side: tip of the mouth black: feelers black; first joint pale green; fourth joint tawny: chest slightly impressed in the fore part, which is chiefly occupied by a broad, short, pitchy band, whose hind border is notched: disk of the scutcheon pitchy: fore-thighs and anterior shanks with black bands; tips of the shanks and of the feet black: fore-wings clouded with irregular pitchy spots: hind-wings almost colourless; veins green. Length of the body 8 lines; of the wings 21 lines.

a. West Africa. From Capt. Parry's collection.

## 5. PTYELUS OBTUSUS.

Testaceus; caput nigro varium; thorax nigro fasciatus; pedes nigro maculati; alæ anticæ maculis nigris ornatæ.

Testaceous, shining: head and chest minutely punctured, covered with pale down: head above very short, impressed, with a black band on the hind border between the eyelets, hardly longer than the breadth of the eyes; face convex, with a triangular black spot next the crown, a spindle-shaped black streak on the flat longitudinal stripe, and two black spots on the middle of each side, which has about fifteen equally distinct cross ridges: feelers black, testaceous at the base and at the tips: chest adorned near the fore border with a broad, short, black band, whose hind border is notched: anterior feet and tips of the shanks and of the hind-feet black; a black spot on each side of the anterior thighs and shanks: forewings indistinctly speckled with pale brown, adorned with black angular spots round the tips and along part of the hind borders: hindwings almost colourless; veins brown, tawny towards the base. Length of the body 8 lines of the wings 19 lines.

a. Sierra Leone. Presented by J. O. Westwood, Esq.

#### O 6. PTYELUS EBURNEUS.

Flavo-albus; thorax nigro quadriguttatus; abdomen supra piceum; tibiæ anticæ nigro fasciatæ; tarsi anteriores nigri; alæ anticæ fuscæ, flavo-albo bimaculatæ.

Yellowish white, shining: head and chest flat, very minutely punctured; face very convex, yellow, not keeled, but with a narrow,

flat stripe, on each side of which are about twelve equally distinct slightly oblique ridges: mouth with a black tip; maxillæ ferruginous; a black dot near each eyelet: antennæ black; first joint yellow; third joint tawny: chest with four black dots along the fore border: abdomen pitchy above: anterior feet and tips of the hind-feet and of the shanks black; fore-shanks with black bands: forewings brown, darkest along the fore border; two very large yellowish white spots extend half across the wing from the fore border: hind-wings brown, colourless along three-fourths of the fore border from the base, and with a few colourless streaks elsewhere; veins black, tawny towards the base. Length of the body 5 lines; of the wings 15 lines.

 $\mathcal{O}$  Var.  $\beta$ . Chest with four black spots; the two hinder united, and very much larger than the fore pair.

a, b. Port Natal. From Mr. Tucker's collection. c, d. Port Natal. From M. Gueinzius' collection.

#### 7. PTYELUS GIGAS.

Cercopis gigas, Fabr. Ent. Syst. Suppl. 522, 1, 2. Syst. Rhyn. 89,
 5. Stoll, Cic. pl. 17, f. 96.

Cayenne.

#### 8. PTYELUS NEBULOSUS.

Cercopis nebulosa, Fabr. Ent. Syst. iv. 50, 14. Syst. Rhyn. 94, 3.

East Indies.

#### O 9. PTYELUS RETICULATUS.

Fuscus; abdomen luridum, apice piceum; alæ anticæ nebulosæ.

Brown, shining: head and chest flat, covered with tawny down, thickly punctured: head almost conical above; face slightly convex, with a broad, flat, longitudinal stripe, on each side of which are about thirteen equally distinct oblique ridges; epistoma long, with a black tip: mouth ferruginous, black towards the tip: feelers pitchy; tips of the joints yellow: abdomen lurid, pitchy at the tip: tips of the shanks and of the feet pitchy: fore-wings clouded, and here and there reticulated with dark brown, very narrow towards the tips: hind-wings brown, darker at the tips, almost colourless beneath the fore border for two-thirds of the length from the base; veins brown, tawny towards the base. Length of the body 8 lines; of the wings 18 lines.

a. Philippine Islands. From Mr. Cuming's collection.

### 10. PTYELUS SPECULIGUTTA.

Niger; caput ferrugineo trimaculatum; thorax ferrugineo et fulvo fasciatus; scutellum apice luteum; alæ anticæ fulvo bivittatæ et unimaculatæ.

Black, shining, bare: head and chest very finely punctured: head above flat, semicircular in front, with three ferruginous marks on the fore border; face slightly convex, roughly punctured, not keeled, with about twelve slight cross ridges on each side: mouth ferruginous at the base: chest convex, slightly wrinkled across in front; a ferruginous band near the fore border; scutcheon flat, very finely striated across; an angular tawny band on the fore border, dilated at each end; tip luteous: fore-wings rather narrow, conical towards the tips, brown from the middle part of the hind border to the disk, adorned with two very oblique tawny streaks; one straight, near the base; the other longer, slightly curved in the middle; a little above and beyond it there is an oblong tawny spot, pointing towards four white dots which are towards the hind border near the tip: hind-wings blackish brown, pale brown at the tips and along the hind borders; a few colourless streaks along part of the veins, which are black. Length of the body 7 lines; of the wings 18 lines.

a. Parà. From Mr. Stevens' collection.

#### O 11. PTYELUS AMPLUS.

Niger, auratus; pectoris latera fulva; abdomen piceum, segmentis flavo-fasciatis; alæ latæ.

Black, shining: head, chest, and fore-wings covered with gilded down: head and chest flat, thickly and minutely punctured: head slightly concave behind, almost conical in front; its length more than one-fourth of its breadth; a short red band along the fore border; face slightly convex, with a flat stripe, on each side of which are twelve strongly marked oblique ridges: mouth extending to the middle hips: breast on each side and hind-chest tawny: abdomen pitchy, with yellow bands along the hind borders of the segments: oviduct ferruginous: hind-shanks ferruginous at the base: forewings rather broad, very convex along the fore border: hind-wings broad, colourless, brown at the tips and along the hind borders; veins black, tawny at the base. Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

a. Java. From the East India Company's collection.

### 2 12. PTYELUS OBSCURUS.

Niger; abdomen basi testaceum; alæ anticæ apice fuscæ.

Aphrophora obscura, Germar, MSS.

Black, shining: head and chest flat, finely punctured, covered with tawny down: head above very convex on the fore border, concave on the hind border; face very slightly convex, with a rather broad, flat, longitudinal stripe, on each side of which are twelve distinct slightly curved ridges: mouth ferruginous at the base; abdomen testaceous at the base: fore-wings blackish brown, narrow, and conical towards the tips: hind-wings slightly gray, brown at the tips and along the hind borders; veins black, tawny at the base. Length of the body 5 lines; of the wings 11 lines.

a. Cape. From M. Dregé's collection.

Var. β.—Piceus; abdomen nigrum, basi fulvum; pedes postici fulvi; alæ anticæ fuscæ.

Pitchy, shining; head and chest flat, minutely punctured, thickly covered with tawny down: head almost conical in front, hardly concave on the hind border; face very slightly convex, thickly punctured, with about twelve equally distinct, hardly curved ridges on each side: mouth tawny with a black tip: abdomen black, tawny at the base: legs pitchy; hind legs tawny: fore-wings dark brown, narrow and conical towards the tips: hind-wings slightly gray, brown at the tips and along part of the hind border; veins black, tawny at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

b. South Africa. Presented by Dr. A. Smith.

## O13. PTYELUS COSTALIS.

Testaceus; caput nigro varium; scutellum piceo fasciatum; abdomen nigrum; pedes picei, tibiis tarsisque posticis fulvis; alæ anticæ fuscæ.

Testaceous, shining: head and chest flat, minutely punctured: head semicircular above, almost straight along the hind border, with four black dots on the fore border; face black, partly yellow on each side, with a broad, flat, longitudinal stripe, on each side of which are six or eight slight, very oblique ridges; epistoma

convex, finely transversely striated: mouth ferruginous with a black tip: scutcheon pitchy towards the tip, which is tawny: abdomen black with a tawny tip: legs pitchy; knees and hind-legs tawny; hind-thighs pitchy; tips of hind-shanks and of hind-feet black: forewings pale brown, narrow and conical towards the tips, pale yellow along part of the fore border: hind-wings almost colourless; their tips very slightly tinged with brown; veins black tawny towards the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 12 lines.

a. North India. From Mr. Warwick's collection.

#### © 14. PTYELUS OCELLIGER.

Ferrugineus; thorax piceus; alæ anticæ flavo-fuscæ, maculis 5 albidis nigro circumdatis ornatæ.

Ferruginous, shining: head above flat, blackish, thickly punctured, almost conical in front, hardly concave along the hind border; face very convex, short, smooth, with indistinct cross ridges on each side: mouth pitchy towards the tip: chest pitchy, transversely rugulose: tips of the shanks and of the feet black; forewings yellowish-brown, adorned with five whitish spots, which are mostly encircled with black, three at one-third, and three at two-thirds of the length, two on the fore border, and four near the hind border; a blackish oblong spot on the hind border close to the tip: hind-wings slightly gray, pale brown at the tips and along the hind borders; veins black, tawny towards the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 11 lines.

a. Columbia. From Mr. Turner's collection.

#### ♦ 15. PTYELUS DISCIFER.

Testaceus; abdomen ferrugineum; alæ anticæ ferrugineæ maculis duabus limpidis duabusque fuscis ad costam ornatæ.

Testaceous, shining: head and chest flat, finely punctured: head conical in front, concave along the hind border, smooth beneath; face very slightly convex, flat on the disk; cross ridges on each side oblique, indistinct; epistoma slightly keeled: mouth ferruginous with a pitchy tip: chest minutely rugulose: abdomen ferruginous: fore-wings ferruginous, with four large subquadrate spots on the fore border, two whitish and two brown; disks of the areolets more or less whitish: hind-wings colourless, very slightly tinged

with brown along the border; veins black, tawny at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a, b. Columbia. From Mr. Turner's collection.c. Columbia. From M. Jurgens' collection.

## 6 16. PTYELUS TERRENUS.

Ferrugineus; caput nigro quinque-guttatum; facies nigra, fulvo fasciata; pectus piceo maculatum; abdomen nigrum, ferrugineo fasciatum; pedes fulvi; alæ anticæ flavo-fuscæ, fusco obliquè bivitatæ.

Aphrophora terrena, Germar, MSS.

Ferruginous, shining: head and chest flat, slightly shining, thickly and minutely punctured, covered with tawny down: head concave along the hind border, more convex in front, with five black dots near together on the fore border, inner pair of dots larger than the other three; face black, with an interrupted tawny band, flat on the disk, slightly shelving on each side, which has about twelve oblique, very shallow cross ridges; epistoma keeled: mouth with a black tip: breast with pitchy spots: abdomen black; hind borders of the segments ferruginous: legs tawny: fore-wings yellowish brown, with two darker brown irregular oblique streaks, the second indistinct; tips conical, almost pointed: hind-wings nearly colourless, with brown tips; veins black, pale yellow at the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a. South Africa. Presented by Dr. A. Smith.

Var. β. Fuscus; facies ferruginea, ad discum nigra; coxæ posticæ genuaque postica fulva; alæ posticæ subcinereæ.

Brown, shining: head and chest flat, punctured: head concave along the hind border, more convex in front; its length more than one-fourth of its breadth; face black and flat on the disk, ferruginous and with nine curved oblique ridges on each side; epistoma ferruginous: mouth black, ferruginous towards the base: hind-hips and hind-knees tawny: hind-wings slightly gray; veins black, tawny towards the base. Length of the body 3—3½ lines; of the wings 7—8 lines.

b, c. Cape. From M. Dregé's collection.

### 77. PTYELUS ADUSTUS.

Ferrugineus; caput nigro triguttatum; facies ad discum picea; abdomen piceum, basi apiceque testaceum; alæ anticæ fuscæ, fulvo nebulosæ.

Ferruginous, shining: head and chest flat, thickly and minutely punctured, covered with tawny down, slightly shining: head concave along the hind border, more convex in front, with three black dots near together on the fore border; face pitchy and flat on the disk, tawny and slightly shelving on each side, which has eight or nine oblique, very shallow cross ridges; epistoma keeled: mouth pitchy, ferruginous at the base: feelers black, pale yellow towards the tips: chest slightly impressed on each side in front: abdomen pitchy, testaceous at the base and at the tip: fore-wings brown, thickly and indistinctly mottled with tawny, narrow and conical towards the tips: hind-wings colourless with pale brown tips; veins black, pale yellow at the base. Length of the body  $3\frac{1}{2}$ —4 lines; of the wings 9—10 lines.

Var.  $\beta$ . Brown on the tips of the hind-wings very indistinct. a. Congo. Presented by Sir J. Richardson. b, c. ——?

O Var. β. Luridus; facies picea; pectus piceo bimaculatum; abdomen basi piceum; pedes fulvi; femora basi piceo vittata.

Lurid, shining: head and chest flat, thickly and minutely punctured, covered with tawny down: head concave along the hind border, more convex in front; its length full one-fourth of its breadth; face mostly pitchy, flat on the disk, slightly shelving on each side; epistoma very slightly keeled: tip of the mouth black: breast with a large pitchy spot on each side; abdomen pitchy towards the base: legs tawny; thighs with pitchy streaks towards the base: fore-wings pale lurid, covered with tawny down: hind-wings almost colourless; veins black. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a, b. Sierra Leone. Presented by the Rev. D. F. Morgan. c. West Africa. From Mr. Fraser's collection.

### 6 18. PTYELUS CONIFER.

Ferrugineus; facies picea, vittis duabus flavis conjunctis ornata; pectus nigro fasciatum; abdomen basi testaceum; pedes testacei; alæ anticæ ferrugineæ, costa apicali limpidæ fuscoque vittatæ.

Head and chest ferruginous, flat, very thickly and minutely punctured, covered with tawny down: head short, indistinctly striped with brown, concave along the hind border, more convex in front, its length not more than one-fourth of its breadth; face pitchy, roughly punctured, with ten slight oblique ridges on each side of the disk, which is flat; two yellow stripes along the sides unite near the front and form a cone, and are produced along the breast: epistoma shining, convex, ferruginous, with an oblique furrow on each side: mouth ferruginous with a pitchy tip: breast with a broad black band between the fore-legs and the middle-legs: abdomen ferruginous, testaceous at the base: legs testaceous: fore-wings ferruginous, conical towards the tips which are almost pointed, nearly colourless for half the breadth beneath the fore-border from the middle to the tips; some forked brown streaks in the disk, a few of them communicating with an irregular curved brown stripe, which extends from three-fifths of the length of the fore border to the tip, and is darkest at each end: wings colourless; veins black, tawny at the base. Length of the body 3 lines; of the wings 8 lines.

a. East Indies. From Archdeacon Clerk's collection.

### O 19. PTYELUS QUADRIDENS.

Fulvus, fusco maculatus; facies piceo vittata; abdominis segmenta piceo fasciata; alæ anticæ fuscæ, fulvo bimaculatæ.

Tawny: head and chest flat, minutely punctured, covered with tawny down: head almost conical in front, concave along the hind border, with four very short pitchy stripes, of which the two on each side are united towards the hind border, which has a pitchy band on each side; its length less than half its breadth; face slightly convex, with two black dots near the crown, and with a broad, flat stripe which is mostly pitchy, and has on each side eleven slightly oblique cross ridges, which have pitchy bands between them: tip of the mouth pitchy: chest with three brown angular and slightly forked marks, and with several brown dots: abdomen with a piceous band on each segment: tips of the hind-thighs above and of the feet

pitchy: fore-wings brown, covered with tawny down, partly tawny near the hind border, and with two tawny spots near the tip of the fore border; one large, the other small: hind-wings almost colourless; veins black, tawny at the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

- a. North India. From Mr. Warwick's collection.
- b. North Bengal. From Miss Campbell's collection.
- O Var.  $\beta$ . A tawny, oblique stripe at one-third of the length of each fore-wing.

#### 20. PTYELUS CRIBRATUS.

Fulvus, flavo vittatus; pectus piceo maculatum; abdomen piceum, fulvo fasciatum; pedes picei, femoribus subtus, tarsisque flavis; alæ anticæ piceo punctatæ.

Tawny: head and chest thickly and roughly punctured, with an interrupted yellow stripe; punctures pitchy, as are also here and there the spaces between them: head flat, almost conical in front; its length more than one-fourth of its breadth; hind border forming a very obtuse angle; face very convex, almost oval, having on each side about fifteen oblique cross ridges, with punctured spaces between them; epistoma slightly keeled: mouth pitchy, reaching the hind hips, luteous towards the base: feelers pitchy, with tawny tips: chest very slightly convex, with an indistinct cross furrow: breast with some pitchy spots: abdomen pitchy, excepting the hind borders of the segments: legs pitchy; thighs yellow beneath; feet yellow, with pitchy tips: fore-wings convex along the fore border, conical towards the tips, very thickly covered with pitchy punctures; spaces between the punctures here and there pitchy; veins pitchy, yellow in some parts: hind-wings grayish; veins ferruginous. Length of the body 4 lines; of the wings  $9\frac{1}{2}$  lines.

a. United States. Presented by E. Doubleday, Esq.

#### 21. PTYELUS GUTTIFER.

Luridus, subtus flavus; caput nigro biguttatum; abdomen luteum; pedes flavi; alæ anticæ ferrugineæ, albo vittatæ, nigro-biguttatæ.

Lurid: head and chest flat, slightly shining, closely and minutely punctured, thickly covered with tawny down: head concave

along the hind border, very convex in front; a short yellow band with two black dots on the fore border; face yellow, very slightly convex, with a flat, middle stripe, on each side of which are nine oblique extremely shallow ridges; the spaces between them are tawny: mouth tawny, with a black tip: breast yellow: abdomen luteous: legs yellow; tips of the spines and of the feet pitchy: fore-wings ferruginous, thickly covered with tawny down, with two whitish oblique stripes on the fore border near the tip where there is a black dot; first streak broad, second very small; a black dot near the tip of the hind border; a few whitish streaks along the veins: hindwings colourless; veins black, tawny towards the base. Length of the body 3 lines; of the wings 7 lines.

a, b. North Bengal. From Miss Campbell's collection.

### 22. PTYELUS DETRITUS.

Testaceus, subtus ferrugineus; caput maculâ piceâ bidentatâ ornatum; abdomen ferrugineum; pedes fulvi; alæ anticæ angustæ, albido subnebulosæ.

Testaceous, shining: ferruginous beneath, head and chest roughly punctured: head almost flat, slightly concave on the hind border, rather more convex in front, with a forked pitchy spot around the eyelets; its length less than one-fourth of its breadth; face convex, scutcheon-shaped, with about twelve curved, oblique stripes on each side: mouth with a black tip, extending far beyond the hind-hips: abdomen ferruginous: legs tawny: fore-wings narrow with conical tips, very thickly punctured, indistinctly mottled with dingy white: hind-wings colourless; veins black, tawny at the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a, b. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq. c, d. ——?

#### O 23. PTYELUS PARALLELUS.

Flavus; caput piceo vittatum et bimaculatum; thorax piceo-maculatus; pectus ad partem et abdomen ferruginea; pedes ferrugineo fasciati; alæ anticæ ferrugineo punctatæ.

Lepyronia parallela, Say.

Yellow: head and chest very roughly punctured, shining; punctures ferruginous: head flat, conical, with a cross suture in front of the eyes, and thence very slightly inclined upwards to the

fore border, with a very broad pitchy stripe, which embraces the eyelets and is intersected by a narrow yellow stripe; its length a little less than half its breadth; hind border forming a very obtuse angle; a pitchy spot on each side by the eye, which has a yellow band; face very convex, almost oval, with a slender flat stripe, on each side of which are about eighteen pitchy, punctured, shallow, oblique, cross furrows; epistoma slightly keeled: mouth with a pitchy tip, reaching very little beyond the hind hips: feelers pitchy, tawny towards the tips: chest hardly convex, indistinctly keeled, with a slight cross furrow; a slender yellow stripe on the fore part and on the scutcheon, intersecting an irregular pitchy mark: breast partly ferruginous: abdomen and oviduct ferruginous: legs with ferruginous bands; tips of the feet pitchy: forewings very thickly punctured, convex along the fore border, conical towards the tips; punctures ferruginous; two short, slight, oblique yellow stripes on the disk, formed by the absence of punctures; the spaces between the punctures adjoining some parts of these stripes are ferruginous: hind-wings almost colourless; veins tawny. Length of the body 4 lines; of the wings  $9\frac{1}{2}$  lines.

a, b. Nova Scotia. From Lieut. Redman's collection.

#### O 24. PTYELUS GELIDUS.

Flavus; caput piceo vittatum; abdomen piceum flavo fasciatum et bivittatum; pedes ferrugineo fasciati; alæ anticæ ferrugineo et piceo punctatæ.

Yellow: head and chest very roughly punctured, shining; punctures ferruginous: head flat, with a broad pitchy stripe, which embraces the eyelets and is intersected by a narrow yellow stripe; its length not more than one-fourth of its breadth; fore border almost semicircular; hind border forming an obtuse angle; face very convex, scutcheon-shaped, with a sleuder stripe, on each side of which are about fifteen indistinct, oblique cross ridges; the spaces between them have ferruginous punctures: mouth with a pitchy tip, extending beyond the hind-hips: feelers pitchy, tawny towards the tips: chest very slightly convex, almost flat in front, indistinctly keeled; some parts on each side ferruginous between the punctures: abdomen pitchy, yellow on each side and along the hind borders of the segments: legs with ferruginous bands; tips of the feet pitchy: fore-wings very thickly punctured, convex along the fore border, conical towards the tips; punctures ferruginous, here and there pitchy as are also the spaces between them; some parts compara-

tively free from punctures: hind-wings almost colourless; veins tawny. Length of the body 3 lines; of the wings  $7\frac{1}{2}$  lines.

a. Nova Scotia. From Lieut. Redman's collection.

#### 25. PTYELUS INTERRUPTUS.

Castaneus; caput albo bimaculatum, antice ferrugineum; pedes fulvi; alæ anticæ flavo interruptè bifasciatæ.

Nearly allied to P. occiligera. Chestnut colour, shining, minutely punctured: head ferruginous in front, slightly depressed on each side, with two whitish spots near the hind border between the eyes and the eyelets; face smooth, ferruginous, very convex; ridges on each side oblique, very slight: mouth and legs tawny: chest transversely rugulose: fore-wings adorned with two interrupted angular yellow bands: hind-wings grayish; veius black, tawny towards the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a. Columbia. From M. Jurgens' collection.

### 26. PTYELUS CONCOLOR.

Testaceus, depressus; facies ad discum nigra; abdomen subtus nigricans; alæ posticæ limpidæ.

Testaceous, very minutely punctured, covered with pale down: head and chest flat: head concave along the hind border, more convex in front; disk of the face black, with a broad shallow furrow, on each side of which are nine hardly oblique ridges: mouth and underside of abdomen blackish: hind-wings colourless; veins tawny, paler towards the base. Length of the body 4 lines; of the wings 9 lines.

a. ——?

## 27. PTYELUS SEXVITTATUS.

Flavus, nigro sexvittatus; pectus disco nigrum; abdomen piceum, fulvo fasciatum et univittatum; alæ anticæ fuscæ, angustæ, albo bimaculatæ, albido quadrinotatæ.

Yellow, shining: head and chest flat, minutely punctured, adorned with six black stripes: head concave along the hind border, almost conical in front; its length less than half its breadth; face

very convex, with indistinct cross ridges on each side, black towards the epistoma, which is also black: disk of the breast mostly black: abdomen pitchy; a short dorsal stripe, hind borders of the segments and oviduct tawny: legs yellow; tips of the hind shanks and of the hind-feet pitchy: fore-wings brown, narrow, with two very large white spots on the fore border, with two indistinct whitish marks near the base, and with two more along the hind border: hind-wings colourless; veins tawny, pale yellow towards the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. North India. From Mr. Warwick's collection.

### 28. PTYELUS QUADRANGULARIS.

Ferrugineus, flavo notatus; caput fulvo varium, facie picea; abdomen piceo varium; pedes picei, flavo varii; alæ anticæ fulvæ piceo fasciatæ.

Lepyronia quadrangularis, Say.

Ferruginous: head and chest flat, thickly and minutely punc tured, with a few small, irregular, yellow marks: head partly tawny on each side, almost straight along the hind border, conical in front; its length about half its breadth; face convex, pitchy, with a broad, flat stripe, on each side of which are ten strongly marked, very oblique cross ridges, with ferruginous spaces between them: mouth reaching the middle hips; tip pitchy: abdomen partly pitchy; legs pitchy; anterior thighs with yellow spots; hind legs yellow with pitchy bands: fore-wings tawny, convex along the fore border, partly pitchy at the base and at the tips, and with two pitchy oblique bands which form an angle: hind-wings almost colourless; veius pitchy, tawny towards the base. Length of the body 3 lines; of the wings 7 lines.

a, b. North America. Presented by the Entomological Club. c, d. Nova Scotia. From Lieut. Redman's collection.

#### 29. PTYELUS MUTANS.

Piceus; caput subtus fulvum; pectus fulvo marginatum; abdomen supra purpureo tinctum, segmentorum marginibus posticis subtus flavis; pedes fulvi; alæ anticæ fuscæ, maculis vittaque limpidis macula fasciaque fulvis, fasciaque rufa ornatis.

Pitchy: head and chest flat, minutely punctured, clothed with black down: head very slightly concave along the hind border,

almost conical in front; its length about half its breadth; a tawny band along the fore border, interrupted in the middle; face tawny, convex, pitchy towards the epistoma; with a flat middle stripe, on each side of which are seven oblique, slightly curved, very shallow cross ridges; epistoma pitchy: mouth tawny, reaching the middle hips: the breast tawny, with a pitchy disk: abdomen with a purple tinge above; hind borders of the segments yellow beneath: legs tawny; tips of the feet brown: fore-wings dark brown; a short colourless stripe on the fore border at one-third of the length; a large angular colourless spot on the fore border near the tip; adjoining it there is a smaller tawny spot, and beneath it a bright red band, which extends from it to the hind border; two colourless spots, one of them very small, are nearer the tip, close to which there is a tawny band: hind-wings pale brownish gray; veins black, tawny at the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a, b. West Coast of America. Presented by Capt. Wood and Lieut. Wood.

## 30. PTYELUS SIMULANS.

Testaceus; caput piceo quadrivittatum, subtus flavum; thorax piceo novem-vittatus; pectus nigro fasciatum; pedes fulvi; alæ anticæ ad costam sublimpidæ, fusco vittatæ.

Testaceous: head and chest flat, very minutely punctured, covered with tawny down: head concave along the hind border, almost conical in front, with four slender, indistinct, interrupted pitchy stripes; its length less than half its breadth; face yellow, slightly convex, with a pitchy disk, and towards the front with a black border; on each side are ten very oblique cross ridges; epistoma tawny: mouth pitchy, tawny towards the base: chest with nine indistinct slender pitchy stripes: breast with a broad black band between the fore hips and the middle hips, and with a short pitchy stripe on each side: legs tawny; knees yellow; tips of the feet pitchy: fore-wings almost colourless along the fore border, with the exception of two large brown marks; one at the base; the other beyond half the length, sending forth two irregular diffused and interrupted branches, one extending towards the base, the other to the tip: hind-wings colourless; veins brown, tawny towards the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Java. From the East India Company's collection.

#### 6 31. PTYELUS FINGENS.

Flavus; thorax piceo bivittatus; abdomen fulvum; alæ anticæ albidæ, ferrugineo vittatæ, ad margines posticos fulvæ.

Yellow, shining: head and chest flat: head concave along the hind border, more convex in front where it has a slight notch on each side; its length less than half its breadth; face convex, almost oval, with a punctured middle stripe, on each side of which are nine shallow oblique cross ridges; epistoma slightly keeled: mouth tawny, reaching to the middle hips; maxillæ ferruginous; chest punctured, slightly impressed across in front, with a pitchy stripe extending on each side from the eye to the base of the forewing; abdomen tawny; tips of the feet pitchy: fore-wings whitish, pale tawny towards the hind border, with an undulating ferruginous stripe, which extends through the disk from the base to the tip; hind-wings colourless; veins pale yellow. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Colenso. Presented by Dr. Hooker.

#### 32. PTYELUS TRIMACULATUS.

- O Aphrophora trimaculata, White, Zool. Voy. Erebus & Terror, pl. 7, fig. 10.
  - a. New Zealand. Presented by Dr. Sinclair.
  - b, c. New Zealand. Presented by Dr. Hooker.
  - d. New Zealand. Presented by Dr. Hooker.
  - e, f. Colenso. Presented by Dr. Hooker.

#### O 33. PTYELUS SUBVIRESCENS.

- Aphrophora virescens, White, Zool. Voy. Erebus & Terror, pl. 7, f. 9.
  - a. New Zealand. Presented by Capt. Sir James C. Ross.

#### • O 34. PTYELUS PUNCTUM.

Fulvus; facies et pectus nigricantia; alæ anticæ marginis postici prope apicem fusco biguttatæ.

Pale tawny, covered with pale down: head and chest almost flat: head very convex in front, with two furrows which diverge from the fore border and communicate with two more oblique im-

pressions near the hind border; face very convex, with a blackish disk, which has about eight oblique ridges on each side: disk of the breast blackish: fore-wings with a dark brown dot on the hind border near the tip: hind-wings colourless; veins pale straw-colour. Length of the body  $2\frac{1}{2}$  lines; of the wings  $5\frac{1}{2}$  lines.

a. North Bengal. From Miss Campbell's collection.

#### 35. PTYELUS BASIVITTA.

Fulvus; caput anticum subtus pectorisque latera nigricantia; abdomen nigrum, basi apiceque fulvum; alæ anticæ basi nigro vittatæ.

Pale tawny, covered with pale down: head and chest almost flat: head very convex in front, slightly impressed on each side by the fore border, about which it is blackish beneath; face very convex, with about ten oblique ridges on each side: breast blackish beneath the base of each fore wing: abdomen black, pale tawny at the base and at the tip: fore-wings with a blackish stripe, extending along more than one-third of the length, parallel to the fore border: hindwings colourless; veins pale straw-colour. Length of the body  $2\frac{1}{2}$  lines; of the wings  $5\frac{1}{2}$  lines.

a. Hudson's Bay. Presented by G. Barnston, Esq.

## 36. PTYELUS BIFASCIATUS.

Cicada? Geoff. Ins. Par. i. 415, 2. Deg. Act. Holm. 1741, 221, pl. 7. Reaum. Act. Par. 1705, 162. Ray, Ins. 67. Swammerd. (4to.) 83, Bibl. vii. 215. Merian, Ins. 77, pl. 51. Petiv. Gazoph. pl. 61, f. 9. Blanch. Ins. 97, pl. 11. Frisch. Ins. viii. 26, pl. 12. Roes. Ins. n. Gryll. 139, pl. 23. Sulz. Ins. pl. 10, f. 64. Schæff. Elem. pl. 42.

Note.—Some of these synonyms may belong to A. spumaria.

Cicada spumaria? Scop. Ent. Carn. 331. Fuessl. Ins. Helv. 450. Gmel. Ed. Syst. Nat. i. 4, 2102, 24.

Cicada spumaria graminis, Deg. Ins. iii. 163, 1, pl. 11, f. 1—21.
Aphrophora bifasciata, Germ. Mag. Ent. iv. 51, 3. Burm. Handb.
Ent. ii. 1, 122, 3.

O Cercopis spumaria, Fall. Act. Holm. 1805, 246, 4. Zett. Ins. Lapp. 514, 2. Costa, Faun. Regn. Nap. Ins. Emitt. Arc. 2, 2.

Ptyela spumaria, Herr.-Schæff. Nom. Ent. 67.

Var. a., Burm.

O Cicada bifasciata, Linn. Syst. Nat. xii. 77, 706, 11. Faun. Suec. (i.) 633, (ii.) 898. Stoll. Cic. 77, pl. 19, f. 105. Gmel. Ed. Syst. Nat. i. 4, 2101, 11.

Cicada trifasciata, Deg. Ins. iii. 186, 6, pl. 11, f. 25.

O Cicada Enotheræ, Scop. Ent. Carn. 114, 334. Gmel. Ed. Syst. Nat. i. 4, 2110, 160.

O Cercopis Enotheræ, Schr. Faun. Boic. ii.

O Aphrophora Dianthi, St. Farg. et Serv. Enc. Meth. x. 608, 2.

Aphrophora Enotheræ, Germ. Mag. Ent. iv. 53, 5.

© Cercopis spumaria, Var. a. maculata, Zett. Ins. Lapp. 514.
© Ptyelus, Var. 1, argyrocephalus; © 2, bifasciatus; 3, grisescens, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 192, 424.

- Cercopis rustica? Fabr. Sp. Ins. ii. 330, 10. Mant. Ins. ii. 275, 16. Ent. Syst. iv. 54, 33. Syst. Rhyn. 97, 51. Gmel. Ed. Syst. Nat. i. 4, 2102, 106.
- O Var. b., Burm.

O Var. c., Burm.

Cercopis 4-maculata, Schr. Faun. Boic. ii.

♦ Var. d., Burm.

O Cercopis bifasciata, Fabr. Sp. Ins. ii. 329, 6. Mant. Ins. ii. 274, 9. Ent Syst. iv. 56, 42. Syst. Rhyn. 98. Coqueb. Illustr. i. 34, pl. 8, f. 10.

6 Var. e., Burm.

O Cercopis capitatus, Fabr. Ent. Syst. iv. 56, 41.

Melanaphrus, Van 1, capitatus, 2, subniger, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 193, 426.

♦ Var. f., Burm.

O Cicada leucocephala, Linn. Faun. Suec. 885. Syst. Nat. 709, 28. Geoff. Ins. Par. i. 421, 13. Schaff. Icon. pl. 237, f. 6.

O Cercopis leucocephala, Fabr. Sp. Ins. ii. 325, 23. Mant. Ins. ii. 270, 29. Ent. Syst. iv. 52, 21. Syst. Rhyn. 95, 39. Gmel. Ed. Syst. Nat. i. 4, 2106, 28. Schr. Faun. Boic. Panz. Faun. Germ. vii. 20.

Cercopis flavicollis, Schr. Faun. Boic. ii. 4, 1066.

Cercopis marginella, Fabr. Syst. Rhyn. 95, 37. O Cercopis spumaria, Var. η, Fall. Act. Holm. 1805, 246.

Cercopis spumaria, Var. l, leucocephala, Zett. Ins. Lapp. 515.

Cercopis spumaria, Var. l, Fall. Act. Holm. 1805, 246.

Cercopis spumaria, Var. l, Fall. Act. Holm. 1805, 246.

Cercopis lateralis, Var. b, Panz. Faun. Germ. vi. 24.

Aphrophora marginella, Germ. Mag. Ent. iv. 54, 8. Var. g., Burm.

O Cercopis xanthocephala, Schr. Faun. Boic. ii.

Var. h., Burm.

Cercopis Populi, Fabr. Spec. Ins. ii. 331, 14. Mant. Ins. iv. 275, 21. Ent. Syst. iv. 57, 45. Syst. Rhyn. 98, 63. Gmel. Ed.

Syst. Nat. i. 4, 2103, 32.

Cercopis spumaria, Var.  $\delta$ , Fall. Act. Holm. 1805, 246.

Cercopis spumaria, Var. c, pallida, Zett. Ins. Lapp. 515. Var. i, Burm. Ray, Ins. 68, 2. Geoff. Ins. Par. i. 416, 3.

Cicada lateralis, Linn. Syst. Nat. (ed. xii.) 709, 29. Faun. Suec. 885.

Gmel. Ed. Syst. Nat. i. 4, 2106, 29.

Cercopis lateralis, Fabr. Spec. Ins. ii. 324, 18. Mant. Ins. ii. 270, 24. Ent. Syst. iv. 35, 34. Syst. Rhyn. 96, 46. Fuessl. Ins. Helv. 24, 460. Panz. Faun. Ins. Germ. vi. 24.

O Cercopis spumaria, Var. θ, Fall. Act. Holm. 1805, 246.

O Cercopis spumaria, Var. g, lateralis, Zett. Ins. Lapp. 515.

Aphrophora lateralis, Germ. Mag. Ent. iv. 53, 9.

Catachilus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 192, 4, 423.

Cercopis spumaria, Var. v? Fall. Act. Holm. 1805, 246.
Cercopis spumaria, Var. k, vittata? Zett. Ins. Lapp. 516.

Q Tettigonia vittata? Ahr. Faun. Eur. Fasc. vi. f. 20.

Var. k, Burm.

C Cicada vittata, Linn. Faun. Suec. 889. Fuessl. Ins. Helv. 24, 464. Gmel. Ed. Syst. Nat. i. 4, 2107, 36.

Cercopis vittata, Fabr. Sp. Ins. ii. 324, 17. Mant. Ins. ii. 270, 23. Ent. Syst. iv. 53, 25. Syst. Rhyn. 96, 45.

Hypomius, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 192, 425.

Cercopis biguttata, Fabr. Syst. Rhyn, 97, 53.

Var. Cercopis 4-punctata, Schr. Faun. Boic. ii. 1070. Var. Cercopis fasciata, Schr. Faun. Boic. ii. 57, 1068.

6 Var. Cercopis gibba, Fabr. Spec. Ins. ii. 334, 11. Mant. Ins. ii. 275, 16. Ent. Syst. iv. 54, 34. Syst. Rhyn. 97, 52. Gmel. Ed. Syst. Nat. i. 4, 2102, 107.

Cercopis spumaria, Var. β, Fall. Act. Holm. 1805, 246.

Cercopis spumaria, Var. b, gibba, Zett. Ins. Lupp. 514. Var. Čercopis spumaria, Var. ζ, Fall. Act. Holm. 1805, 246.

O Cercopis spumaria, Var. e, obscura, Zett. Ins. Lapp. 515.

Var. Cercopis præusta? Fabr. Ent. Syst. iv. 53, 28.

Issus præustus? Fabr. Syst. Rhyn. 100, 5.

© Cercopis spumaria, Var. k. Fall. Act. Holm. 1805.

a-z. England.

a a-z z. S. France.

a a a. Geneva. Presented by M. Goureau.

b b b. - Presented by J. G. Children, Esq. c c c. Scotland. Presented by R. N. Greville, Esq.

## 37. PTYELUS LINEATUS.

Cicada lineata, Linn. Syst. Nat. (Ed. xii.) 709, 31. Faun. Suec. 888. Gmel. Ed. Syst. Nat. i. 4, 2103, 31.

Cercopis lineata, Fabr. Spec. Ins. ii. 330, 8. Mant. Ins. ii. 274, 13. Ent. Syst. iv. Rhyn. 96, 42.

Cercopis abbreviata, Fabr. Syst. Rhyn. 96, 47. Panz. Faun. Germ.

Cercopis spumaria, Var.  $\mu$ ? Fall. Act. Holm. 1805, 246. Cercopis spumaria, Var. i, lineata? Zett. Ins. Lapp. 516.

Cercopis campestris? Fall. Act. Holm. 1805, 252. Zett. Ins. Lapp. 516, 3.

Aphrophora lineata, Germ. Mag. Ent. iv. 53, 6. Burm. Handb. Ent. ii. 1, 123, 4.

Aphrophora abbreviata, Germ. Mag. Ent. iv. 54, 10.

Catagrammus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 192, 423.

a. ——? Presented by J. G. Children, Esq.

b, c. ---?

#### O 38. PTYELUS MISPACHTHUS.

Mispachthus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 194, 427.
France, Italy.

### 5 39. PTYELUS LEUCOPHTHALMUS.

Dtyelus bifasciata, Var.?

Cicada leucophthalma, Linn. Faun. Suec. 883. Gmel. Ed. Syst. Nat. i. 4, 2106, 26.

6 Cercopis leucophthalma, Fabr. Spec. Ins. ii. 325, 21. Mant. Ins. ii. 270, 28. Ent. Sust. iv. Sust. Rhyn. 95, 38.

270, 28. Ent. Syst. iv. Syst. Rhyn. 95, 38. Cercopis spumaria, Var. e? Fall. Act. Holm. 1805, 246.

© Cercopis spumaria, Var. d, leucophthalma, Zett. Ins. Lapp. 515.
© Aphrophora leucophthalma, Germ. Mag. Ent. iv. 53, 4. Faun. Ins.

ix. pl. 17.

Europe.

### 40. PTYELUS PUBESCENS.

Tettigonia pubescens, Curtis.

a—h. England. Presented by F. Walker, Esq. i. South of France.

#### 41. PTYELUS EXCLAMATIONIS.

Cicada exclamationis, Thunb. Act. Ups. iv. 24, 40. Gmel. Ed. Syst. Nat. i. 4, 2108, 143.

O Cercopis exclamationis, Fall. Act. Holm. 1805, 253, 7. Cic. 21, 8. Zett. Ins. Lapp. 517, 4.

Fuscus, depressus, subtus fulvus; pectoris discus niger; abdomen supra nigrum; pedes flavi; alæ anticæ ad costam albo bimaculatæ.

Brown, covered with pale down: head and chest flat: head slightly impressed on each side of the disk, concave along the hind border, almost conical in front; face tawny, shining, very convex, having on each side about twelve oblique brown bands which are very indistinct with the exception of five between the eyes: breast tawny with a black disk: abdomen black above, tawny beneath: legs yellow: fore-wings pale brown, darker along the hind border near the tips, with two large, almost triangular white spots on the fore border: hind-wings colourless; veins brown. Length of the body  $1\frac{3}{4}$  line; of the wings  $3\frac{1}{2}$  lines.

a. - ? Presented by J. G. Children, Esq.

## 42. PTYELUS? APICALIS.

Ptyelus apicalis, St. Farg. et Serv. Enc. Méth. x. 608. Aphrophora apicalis, Germ. Mag. Ent. iv. 53, 7. Europe.

## 0 43. PTYELUS ALBILATERA. P. C.

O Aphrophora albilatera, Germar, MSS.

Stramineus, depressus; abdomen fulvum; alæ anticæ ad costam albidæ.

Straw colour, covered with pale down: head and chest flat above: head concave behind, more convex in front; face slightly convex; ridges on each side very indistinct: abdomen tawny: forewings whitish along the fore border; veins ferruginous: hind-wings colourless; veins pale straw colour. Length of the body 2 lines: of the wings 4 lines.

a. Cape. From M. Dregé's collection.

## 44. PTYELUS TRIVIRGATUS.

Ptyelus trivirgatus, Amyot et Serv. Hist. Nat. Hém. 567, 2, pl. 10, f. 9.

## <sup>0</sup> 45. PTYELUS FERRUM-EQUINUM.

Ptyelus ferrum-equinum, St. Farg. et Serv. Enc. Méth. x. 608, 1.

### 46. PTYELUS MIRABILIS.

Ptyelus mirabilis, Amyot, Hist. Nat. Hém. 566, 1. Cercopis mirabilis, Blanch. Hist. Nat. Ins. iii. 187, 1. New Holland; Madagascar.

#### 47. PTYELUS SUBFASCIATUS.

Fulvus; caput supra luteum, subtus anticè piceum; thorax fusco sexvittatus; pectoris discus niger; abdomen piceum basi fulvum; tibiæ posticæ apice nigræ; alæ anticæ albo bifasciatæ, basi fulvo maculatæ.

Pale tawny, shining, very finely punctured: head above luteous, slightly concave along the hind border, very convex in front; face very convex, pitchy towards the epistoma, which is also pitchy; ridges on each side very slight: chest with six brown stripes; a brown spot on each side by the base of the fore-wing: disk of the breast black: abdomen pitchy, pale tawny at the base: tips of the hind shanks black: fore-wings brown, with a tawny spot on each side at the base, and with two white bands, the first not reaching the hind border, the second interrupted in the middle: hind-wings colourless: veins tawny. Length of the body  $1\frac{3}{4}$  line; of the wings 4 lines.

a. North India. From Mr. Warwick's collection.

## O 48. PTYELUS OBTUSUS.

Cercopis obtusa, Say.
United States.

#### 6 49. PTYELUS IGNIPICTUS.

© Cercopis ignipicta, Harris, Cat. Ins. Massach. United States.

## © Genus 3. LEPYRONIA.

Lepyronia, Amyot et Serv. Hist. Nat. Hém. 567, 463.

Cicada, p., Linn.

O Cercopis, p., Fabr. Panz.

Aphrophora, p., Germ., Burm.

#### D 1. LEPYRONIA OBSCURATA.

Lepyronia obscurata, Amyot et Serv. Hist. Nat. Hém. 567, 1, pl. 10, f. 10.

#### 2. LEPYRONIA SUBFASCIATA.

Lepyronia subfasciata, Amyot et Serv. Hist. Nat. Hém. 567, 2. Brazil.

### 3. LEPYRONIA COLEOPTRATA.

Lepyronia coleoptrata, Amyot et Serv. Hist. Nat. Hém. 567, 3.

O Cicada coleoptrata, Linn. Faun. Suec. 240, 880.

© Cercopis angulata, Fabr. Ent. Syst. iv. 53, 27. Syst. Rhyn. 97, 49. Panz. Faun. Ins. Germ. 103, 10.

♦ Aphrophora coleoptrata, Germ. Mag. Ent. iv. 54, 11.
 ♦ Aphrophora angulata, Burm. Handb. Ent. ii. 123, 5.

Lepyronia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 194, 428.

#### 4. LEPYRONIA SUBFASCIATA?

Lepyronia subfasciata, Amyot et Serv. Hist. Nat. Hém. 567, 2.

a. Brazil. From Mr. Shuckard's collection.

## 5. LEPYRONIA CONVEXA.

Ferruginea; facies flava; pectus et abdomen picea; femora basi, protibiæ et protursi flava; alæ anticæ piceo-maculatæ, albo unifasciatæ.

Pale ferruginous: head and chest flat, thickly and minutely punctured: head almost conical in front, very slightly concave along the hind border; its length about half its breadth; face yellow, very convex and prominent, with about ten shallow hardly oblique ridges on each side, with pitchy spaces between the six next the front; epistoma and mouth pitchy, the latter reaching the middle-hips: breast and abdomen mostly pitchy: thighs towards the base, foreshanks and fore-feet yellow: fore-wings convex, elliptical, with a few pale pitchy spots, pitchy towards the base, near which there is an oblique white band, which does not reach the hind border: hindwings colourless; veins pale yellow. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

Var.  $\beta$ . Fore-wings pale yellow towards the tips, with the exception of the borders of the veins.

a. New Holland. Presented by the Haslar Hospital.

b. New Holland. From Mr. Lambert's collection.

#### 6. LEPYRONIA ALBICINCTA?

Testacea; thorax posticè piceus, albo fasciatus; pectus flavum, piceo varium; pedes fulvi; femora basi flava; alæ anticæ fuscæ, albo fasciatæ.

O Aphrophora albicineta? Erichson, Archiv. i. 1842, 285, 277.

Testaceous, shining: head, chest, and fore-wings thickly and minutely punctured: head and chest flat: head with an indistinct cross furrow in the disk, almost straight along the hind border, slightly conical in front; face very convex and prominent, yellow, with about twelve shallow, very slightly oblique cross ridges on each side; the spaces between eight of these are pitchy; epistoma partly pitchy: mouth tawny, reaching the middle hips; tip pitchy: hind part of the chest pitchy, with a slightly undulating white band: breast yellow, partly pitchy: abdomen pitchy: legs tawny; thighs yellow towards the base; feet pitchy towards the tips: fore-wings convex, elliptical, dark brown for two-thirds of the length, white,

with the exception of the borders of the veins, from thence to the tips; a broad white band at one-third of the length: hind-wings colourless; veins tawny. Length of the body  $1\frac{1}{2}$  line; of the wings 4 lines.

- O Var. β. Fore-wings brown towards the tips with the exception of the fore border, and a few dots on the disks of the areolets.
- a, b. New Holland. Presented by the Entomological Club.
  c, d. New Holland. Presented by the Haslar Hospital.

e. New Holland.

#### 7. LEPYRONIA BREVIS.

Testacea; thorax ad discum piceus; scutellum flavo fasciatum; abdomen piceum; pedes flavi, nigro fasciati; alæ anticæ piceæ, flavo semifasciatæ, ad apices limpidæ.

Testaceous, shining, short, broad: head and chest slightly convex: head very short, as broad as the chest; its length less than onefourth of its breadth; face very convex and prominent, extending beyond the crown, with about twelve very shallow, hardly oblique cross ridges, the spaces between these are darker: mouth with a pitchy tip, reaching the middle hips: chest finely striated across, somewhat pitchy on the disk, bright yellow towards the tip of the scutcheon: abdomen mostly pitchy, legs yellow, adorned excepting the fore-thighs with black bands: fore-wings pitchy, convex, almost elliptical, as if composed of two slightly convex parts, with a colourless spot near the middle of the fore border, almost colourless towards the tips, with the exception of a pitchy spot, and with a short bright yellow band extending from the hind border to the disk near the base: hind-wings almost colourless; veins black. Length of the body  $1\frac{1}{2}$  line; of the wings 3 lines.

a. Columbia. From Mr. Turner's collection.

## 0 8. LEPYRONIA? AUSTRALIÆ.

Nigra, nitens; caput fulvo varium; pectus flavo bivittatum; abdomen basi fulvum; genua fulva; alæ anticæ fulvæ, nigromarginatæ.

Black, shining, short and thick: head short, partly tawny in " front and behind, angular on the hind border, convex in front; face very convex, slightly keeled, having on each side about eight ridges which are very distinct and not oblique: chest convex, transversely

rugulose; breast with a yellow stripe on each side: abdomen partly tawny towards the base: knees tawny: fore-wings tawny, roughly punctured, black towards the base and towards the tips, and along the hind borders: hind-wings colourless. Length of the body 2 lines; of the wings 5 lines.

a. New Holland. Presented by the Haslar Hospital.

### ♦ 9. LEPYRONIA? SIGNIFERA.

Nigra, nitens, brevis, crassa; thorax fuscus, flavo bifasciatus; pedes flavi, fusco fasciati; alæ anticæ subfuscæ.

Black, convex, smooth, shining, very thick, short, and broad: chest adorned with two broad bright yellow bands, between which it is brown: abdomen brown (?): legs yellow, with brown bands: fore-wings pale brown; veins very few. Length of the body 1 line; of the wings 2 lines.

a. Porto Rico. Presented by W. F. Brockholes, Esq.

### O Genus 4. ORTHORHAPHIA.

Orthorhaphia, Westw., Griff. An. Kingd. ii. 263.

#### O 1. ORTHORHAPHIA CASSIDIOIDES.

Orthorhaphia cassidioides, Westw. Griff. An. Kingd. ii. 263, pl. 109, f. 1. Amyot et Serv. Hist. Nat. Hém. 568, 1, pl. 10, f. 8.

a. Brazil. From Mr. Shuckard's collection.

#### 2. Orthorhaphia reducta.

Viridis; caput subtus fulvum, utrinque fusco fasciatum; pectus, abdomen et pedes fulva; alæ anticæ fuscovirides, basi apiceque fulvæ.

Green, convex, shining, minutely punctured: head above flat, almost conical, tawny beneath, with brown bands on each side, very different from that of the preceding species in form: breast, abdomen and legs tawny: fore-wings brownish green on the disk, mostly tawny near the base and towards the tips. Length of the body 13 line; of the wings 3 lines.

a. Brazil. Presented by Capt. Parry.

#### 3. ORTHORHAPHIA TESTACEA.

Testacea, concolor.

Entirely testaceous, like O. reducta in structure: head, chest, and fore-wings shining, minutely punctured. Length of the body 13/4 line; of the wings 3 lines.

a. Brazil. Presented by Capt. Parry.

## Genus 5. MACHÆROTA.

Machærota, Burm. Handb. Ent. ii. 1, 128.

## 1. Machærota ensifera.

Machærota ensifera, Burm. Handb. Ent. ii. 1, 128, 1.

a, b. Philippine Islands. From Mr. Wood's collection.

c, d. Philippine Islands.

e. Java. From the East India Company's collection. f. North India. From Mr. Warwick's collection.

## Genus 6. PERINOIA, n.

Corpus sat angustum: caput productum, conicum.

Body rather uarrow: head flat, long, conical.

#### 1. PERINOIA SEPTEMFASCIATA.

Fusca; caput flavo 4-fasciatum; thorax flavo 3-fasciatus; alæ anticæ angustæ, albo maculatæ et unifasciatæ.

Brown, shining, spindle-shaped, head and chest flat, thickly punctured, slightly rugulose: head produced in front, conical, hardly broader than long, about half the length of the chest, adorned with four yellow bands, very slightly concave along the hind border; face smooth, pitchy, yellow towards the epistoma, with about ten indistinct curved oblique cross ridges on each side; epistoma slightly keeled, tawny towards the tip: mouth yellow with a

pitchy tip, reaching the middle hips: chest with three yellow bands; the first on the fore border; the second near the first, the third on the slightly concave hind border adjoining the scutcheon: forewings narrow, with very numerous cross-veins towards the tips; a white band near the base, not extending to the fore border; two white spots before half the length, one on the fore border, the other on the hind border; two white spots on the fore border nearer the tip, where the disks of all the little areolets are whitish: hind-wings gray; veins black, tawny at the base. Length of the body 5 lines; of the wings 9 lines.

a, b. Philippine Islands. From Mr. Cuming's collection.

## O 2. PERINOIA VARIA.

Nigra, fusiformis; caput fluvo bifasciatum; thorax flavo univitatus; abdomen obscurè flavum; pedes fulvi, tibiis anterioribus supra tarsisque nigris; alæ anticæ flavo sex maculatæ.

Black, shining, spindle-shaped, dingy yellow beneath, head and chest flat, thickly punctured, slightly rugulose: head produced in front, conical, hardly broader than long, about half the length of the chest, concave along the hind border, adorned with two yellow bands; first band interrupted, its borders much jagged; second emitting five short streaks from its hind border; face slightly punctured, convex, with a flat stripe, on each side of which are about ten very oblique cross ridges: mouth tawny, with a pitchy tip, not reaching the middle hips: feelers tawny: chest very slightly convex, with a broad yellow stripe; a furrow on each side extending from the eye to the base of the fore-wing: abdomen dingy yellow: oviduct black: legs tawny; feet black; anterior shanks black above; fore-wings with six yellow marks; first forming a short stripe from the base along the middle; second and third oblique; one by the fore border, the other by the hind border; fourth short, extending from the fore border towards the disk: fifth and sixth forming two stripes, which taper nearly to the tip: hind-wings nearly colourless; veins black, tawny at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. Philippine Islands. From Mr. Cuming's collection.

## Genus 7. CHALEPUS, n.

Caput antice attenuatum, compressum, subarcuatum, ascendens.

Head prolonged like those of some Fulgorina, attenuated, compressed, ascending, more or less curved.

# 1. Chalepus hastatus.

Ferruginea; caput supra et apice nigrum; facies et pectus flavo bivittata; thorax flavo bimaculatus; scutellum piceum, apice flavum; abdomen testaceum; pedes testacei; alæ anticæ flavo fuscæ.

Ferruginous: head and chest finely punctured: head mostly black above towards the tip, forming a long pointed horn, which is inclined upwards, and whose length is more than twice its breadth at the base; face slightly convex, with a yellow stripe on each side; epistoma pitchy, with a tawny stripe: mouth ferruginous, reaching the middle hips; tip pitchy: chest with a small yellow spot on each side; scutcheon pitchy with a yellow tip: breast with a yellow stripe on each side: abdomen and legs testaceous; tips of the feet pitchy: fore-wings yellowish brown, narrow, very convex along the fore border, almost spindle-shaped: hind-wings broad, almost colourless, with a tawny tinge towards the base; veins brown, tawny towards the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. ——?

#### () 2. CHALEPUS TELIFERUS.

Ferrugineus; caput piceo trivittatum; facies flava, piceo vittata; thorax piceo trivittatus; pectus fulvum; abdomen rufescens, segmentorum marginibus flavis; pedes fulvo-flavi, tibiis anterioribus rufis, tarsis anterioribus piceis; alæ anticæ angustæ, piceo bifasciatæ.

Ferruginous: head and chest minutely punctured, covered with tawny down: head tapering, much inclined upward, forming a long prismatic pointed horn; its length more than twice its breadth at the base; three pitchy stripes above; face yellow, spindle-shaped, with a pitchy stripe along the disk, on each side of which are ten distinct very oblique cross ridges; epistoma yellow, with a ferrugi-

nous disk: mouth pitchy: chest with three indistinct pitchy stripes: breast mostly tawny: abdomen reddish; hind borders of the segments yellow: legs yellow, partly tawny; anterior shanks red; anterior feet pitchy: fore-wings narrow, almost spindle-shaped, thickly punctured, covered with tawny down, adorned with two irregular, diffused, slightly oblique pitchy bands: hind-wings slightly gray, brownish at the tips and along the hind borders; veins black, tawny at the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 7 lines.

a. New South Wales. From Mr. Pamplin's collection.

b. New Holland. From Capt. Parry's collection.

## denus 8. ISTHMIA, n.

Caput sat angustum, conicum, transversè striatum, concavum.

Head rather narrow, concave above, conical in front, striated across.

#### 1. ISTHMIA UNDATA.

Nigro-fusca, nitens; scutellum apice, pectus et abdomen ferruginea; pedes anteriores picei; pedes postici fulvi femoribus apice piceis; alæ anticæ fuscæ, fasciis tribus ferrugineis albo marginatis ornatæ.

Blackish-brown, shining: head small almost triangular, slightly convex beneath: mouth tawny: eyes prominent: tip of the scutcheon, breast and abdomen ferruginous: legs pitchy; hind legs tawny; hind-thighs pitchy towards the tips: fore-wings brown, with three broad undulating ferruginous bands, which are partly bordered with white: hind-wings almost colourless; veins tawny. Length of the body  $1\frac{1}{2}$  line; of the wings 4 lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

#### Sub-tribe 6. SERRIPEDES.

Serripedes, Amyot et Serv. Hist. Nat. Hém. 569.

#### O Group 1. TETTIGONIDES.

Tettigonides, Amyot et Serv. Hist. Nat. Hém. 569.

#### Genus 1. TETTIGONIA.

Cicada, p., Linn., Fabr., Fall., Zett.

Tettigonia, p., Latr.

Tettigonia, Germar, Burm., Herrich-Schaffer, Blanch., Amyot et Serv.

Amblycephalus Curtis, Amyot et Serv.

- Euacanthus, St. Farg. et Serv., Herrich-Schaffer, Amyot et Serv.
- O Deltocephalus, Burm. Cicadella, Crochard.

## O 1. Tettigonia 12-punctata.

Tettigonia 12-punctata, Germ. Mag. Ent. iv. 66, 14. Burm. Handb. Ent. ii. 1, 117, 2. Blanch. Hist. Nat. Ins. iii. 190, 1. Amyot et Serv. Hist. Nat. Hém. 570, 1.

- a. Brazil. Presented by John Miers, Esq.
- b. Brazil.
- c. Brazil.

## 2. Tettigonia farinaria.

Tettigonia farinaria, Amyot et Serv. Hist. Nat. Hém. 570, 2, pl. 10, f. 11.

## 3. Tettigonia trifasciata.

Tettigonia trifasciata, Amyot et Serv. Hist. Nat. Hém. 570, 3, pl. 11, f. 10.

a. Parà. From Mr. Stevens' collection.

## 4. Tettigonia farinosa.

Cicada farinosa, Fab. Syst. Rhyn. 70, 41.

Sumatra.

#### O 5. Tettigonia vernicosa.

Tettigonia vernicosa, St. Farg. et Serv. Enc. Méth. x. 601, 1. u—d. Brazil.

#### 06. Tettigonia frontalis.

Tettigonia frontalis, Germ. Mag. Ent. iv. 64, 11.

a. Brazil.

PART III.

## <sup>0</sup>7. Tettigonia cruenta.

Cicada cruenta, Fabr. Ent. Syst. Suppl. 521, 68. Syst. Rhyn. 67, 28.

Cayenne.

## 8. Tettigonia splendida.

- Cicada splendida, Fabr. Syst. Rhyn. 68, 29.
  Cicada festiva, Fabr. Ent. Syst. Suppl. 521, 68.
  Cavenne.
  - 9. Tettigonia pauperata.
- Cicada pauperata, Fabr. Syst. Rhyn. 71, 47. S. America.
  - 0 10. Tettigonia miniata, Hoffm., Germ. Mag. Ent. iv. 69, 20. Brazil.

# 11. Tettigonia incarnata.

Tettigonia incarnata, Germ. Mag. Ent. iv. 69, 21. Brazil.

#### Q2. TETTIGONIA PURPURATA.

Tettigonia purpurata, Germ. Mag. Ent. iv. 63, 10. a—d. Brazil.

## O<sub>13</sub>. Tettigonia 5-maculata.

Tettigonia 5-maculata, Germ. Mag. Ent. iv. 67, 16. Brazil.

## 014. TETTIGONIA XANTHOCEPHALA.

Tettigonia xanthocephala, Germ. Mag. Ent. iv. 63, 9. Brazil.

## O 15. TETTIGONIA? SULCICOLLIS.

Tettigonia sulcicollis, Germ. Mag. Ent. iv. 62, 8. Brazil.

## O 16. TETTIGONIA BIFASCIATA.

Tettigonia bifasciata, Burm. Handb. Ent. ii. 1, 117, 1. Cicada bifasciata, Fabr. Syst. Rhyn. 70, 42. S. America.

## O 17. TETTIGONIA GLAUCOMACULATA.

Tettigonia glaucomaculata, Hoffm., Germ. Mag. Ent. iv. 65, 12. a—c. Brazil.

## D 18. TETTIGONIA VICTIMA.

Tettigonia victima, Germ. Mag. Ent. iv. 68, 18. Brazil.

## C<sub>19</sub>. Tettigonia colorata.

Tettigonia colorata, Germ. Mag. Ent. iv. 68, 17. Brazil.

### O 20. TETTIGONIA BICINCTA.

Tettigonia bicincta, Germ. Mag. Ent. iv. 66, 13. Brazil.

## 21. Tettigonia elegantula.

Tettigonia elegantula, Germ. Mag. Ent. iv. 67, 15. a—c. Brazil. Presented by John Miers, Esq. d. —? From Mr. Argent's collection. e. Venezuela. From Mr. Dyson's collection. f. Brazil.

#### 22. TETTIGONIA QUADRIVITTATA.

Tettigonia quadrivittata, St. Farg. et Serv. Enc. Méth. x. 601, 2. a-d. Brazil.

## 23. Tettigonia pulchella.

Tettigonia pulchella, Guér. Icon. Règ. An. pl. 59, f. 10. Texte, 369.

a. Venezuela. From Mr. Dyson's collection,

b. Mexico.

# O 24. Tettigonia apicalis.

Crocea, nigro maculata; pectoris discus niger; abdomen purpureum; pedes albi, nigro cincti; alæ anticæ apice fuscæ; alæ posticæ nigro-purpureæ.

Bright orange, slender, linear: head convex on the fore border; face obtuse, with a black spot at its base, and one on each side of its tip; a smaller black spot between the eyelets: chest with one black spot in front, one on each side of the hind border of the shield, and one on the disk of the scutcheon: breast with a black disk, and a black spot on each side: abdomen purple: legs white; tips of the thighs, shanks, and feet black; thighs black at the base: fore-wings with a black spot on each at the base; tips brown: hind wings purlish black. Length of the body 6 lines; of the wings 12 lines.

a-f. China. Presented by G. T. Lay, Esq.

## 0 25. Tettigonia confinis.

Crocea, gracilis, nigro maculata; pectoris discus niger; abdomen purpureum; pedes albi, nigro cincti; alæ anticæ apice nigræ; alæ posticæ nigro-purpureæ.

Bright orange, slender, linear: head convex on the fore border; face obtuse, with a black spot at its base, and one on each side of its tip; a black spot between the eyelets: chest with a black spot in front, one on each side of the hind border of the shield, and one on the disk of the scutcheon: breast with a black disk, and with a black spot on each side: abdomen purple: legs white; thighs and tips of the shanks and feet black: fore-wings with a black spot on each at the base; tips black: hind-wings purplish black. Length of the body  $5-5\frac{1}{2}$  lines; of the wings 10-11 lines.

a-c. Canton. Presented by G. T. Lay, Esq. d. China. From Mr. Stevens' collection.

## 26. Tettigonia addita.

Miniata, nigro maculata; pectoris discus niger; abdomen nigropurpureum, segmentorum marginibus posticis apiceque rufis; pedes ferruginei vel fulvi, nigro fasciati; alæ anticæ apice luridæ; alæ posticæ fusco-purpureæ.

Red-lead colour, slender, linear: head convex on the fore border; face obtuse, with a black spot at its base; a large black spot between the eyelets: chest with a black spot in front, one on each side of the hind border of the shield, and one on the disk of the scutcheon: breast with a black disk, and with a black spot on each side: abdomen purplish black; hind borders of the segments and tip red: legs ferruginous or tawny; tips of the thighs, shanks, and feet black; shanks sometimes yellow: fore-wings with a black spot on each at the base; tips lurid, partly brown: hind-wings purplish brown. Length of the body 5—6 lines; of the wings 10—12 lines.

a-d. Java. From Mr. Melly's collection.

### 27. Tettigonia gemina.

Miniata, nigro maculata; pectoris discus niger; abdomen nigropurpureum, segmentorum marginibus posticis apiceque rufis vel fulvis; pedes fulvi, nigro cincti; alæ anticæ apice luridæ; alæ posticæ fusco-purpureæ apice luridæ.

Red-lead colour, slender, linear: head convex on the fore border; face obtuse: chest with a black spot on each side of the hind border of the shield: breast with a black disk: abdomen purplish black; hind borders of the segments and tip red: legs tawny; thighs, tips of the shanks, and feet black; fore-wings with a black spot on each at the base, lurid towards the tips: hind-wings purplish brown, with lurid tips: Length of the body 5 lines; of the wings 10 lines.

O Var.  $\beta$ . Head and chest tawny: head with a black spot between the eyes, another on the base of the face, and a third at its tip: chest with a black spot in front, and one on the disk of the scutcheon: hind borders of the abdominal segments and tip tawny: thighs tawny, with black tips.

a, b. Java. From the East India Company's collection.

### 0 28. Tettigonia obscura.

Fulva, nigro-maculata; thorax ferrugineo varius; abdomen nigropurpureum, apice fulvum; pedes fulvi, nigro cincti; alæ anticæ luteæ, apice luridæ; alæ posticæ fuscæ.

Tawny, slender, linear: head convex on the fore border, face obtuse, with a black spot at its base, some blackish streaks on each side, and a black spot on the tip; a black spot between the eyelets: chest partly ferruginous, with five black spots, one on each side of the shield, and three on the scutcheon: abdomen purplish black; tip tawny: legs tawny; tips of the thighs and of the feet black; fore-thighs and fore-feet mostly black: fore-wings luteous, lurid towards the tips, which are pale brown; hind-wings brown, with a bluish tinge at the base. Length of the body 5—6 lines; of the wings 12—14 lines.

Var. β. Face with two black spots at its base, and with no blackish streaks: shield with a black spot near its fore border, and with a black band on its hind border; fore-thighs tawny with black tips; tips of the fore-wings and of the hind-wings lurid.

a, b. East Indies. From Archdeacon Clerk's collection.

#### O 29. Tettigonia duplex.

Fulva, nigro maculata; pectoris discus nigro-purpureus; abdomen nigro-purpureum, segmentorum marginibus posticis albidis, apice fulvo; pedes albi nigro cincti; alæ anticæ æneo-fulvæ; alæ posticæ purpureo-fuscæ.

Bright pale tawny, slender, linear: head convex on its fore border; face obtuse, with two black spots on its base, and with a black band at its tip; a black spot between the eyelets: shield with a black spot near the fore border, and with a black spot on each side of the hind border; a black spot on the scutcheon, whose tip is black: breast with a purplish black disk, and with a black spot on each side: abdomen purplish black; hind borders of the segments whitish; tip tawny: legs white; hips and tips of thighs, of shanks, and of feet black: fore-wings tawny, with a slight æneous tinge: hind-wings purplish brown. Length of the body 6 lines; of the wings 12 lines.

Var. β. Immature? Abdomen ferruginous: hind-wings pale gray.

*a*—*d*. ——?

### 30. Tettigonia reducta.

Fulva, nigro maculata; pectoris discus niger; abdomen nigrum, apice ferrugineum; pedes ferruginei vel fulvi, nigro cincti; alæ anticæ rufescentes vel luridæ; alæ posticæ purpureofuscæ.

Tawny, slender, linear: head convex on the fore border; face obtuse, with a black spot on its base, and with a black band at its tip; a black spot between the eyelets: shield with a black spot near the fore border, and with a black spot on each side of the hind border; a black spot on the scutcheon, whose tip is black: abdomen and disk of the breast black, tinged with glaucous bloom: abdomen ferruginous towards the tip beneath: legs ferruginous; tips of the shanks and of the feet black: thighs tawny with black tips: fore-wings reddish, tinged with a glaucous bloom towards the base; tips lurid: hind-wings purplish brown with lurid tips. Length of the body 6 lines; of the wings 12 lines.

Var. β. Abdomen pale yellow towards the tip beneath, shanks and feet tawny with black tips: fore-wings lurid, with a red stripe along the fore border towards the tip.

a. Hong Kong. Presented by J. C. Bowring, Esq. b—e. ——?

### D 31. TETTIGONIA INDISTINCTA.

Testacea, nigro maculata; pectus et abdomen nigra, hujus segmentorum margines fulvi; pedes nigri (?); alæ anticæ apice nigræ; alæ posticæ nigricantes.

Dark testaceous, slender, linear: head convex in front, with a large black spot, which is divided between the crown and the obtuse face, whose tip is black; a black spot between the eyelets: shield with a black spot near the fore border, and with a larger black spot on each side of the hind border; a black spot on the disk of the scutcheon: breast and abdomen black; borders of the segments tawny: legs black (?): fore-wings black towards their tips: hind-wings blackish. Length of the body 7 lines; of the wings 12 lines.

a. ——?

### 32. TETTIGONIA PHILIPPINA.

Fulva, nigro varia; abdomen supra nigrum, subtus nigro trifasciatum; tarsi picei; alæ anticæ nigro marginatæ apice rufæ; alæ posticæ fuscæ.

Tawny, slender, linear: head convex in front; crown and face black; face obtuse, with a large spindle-shaped tawny spot on its - disk; epistoma streaked with black: scutcheon and hind part of the shield black: abdomen black above, with three black bands beneath: feet, fore-shanks, and tips of the posterior shanks pitchy: fore-wings black along the borders, dark red at the tips: hind-wings brown. Length of the body 6 lines; of the wings  $11\frac{1}{2}$  lines.

a. Philippine Islands. From Mr. Cuming's collection.

#### O 33. Tettigonia longa.

Ferruginea, subtus fulva; abdominis latera lutea; alæ anticæ nigro interruptè vittatæ; alæ posticæ cupreo-cinereæ.

Ferruginous, slender, linear, pale tawny beneath; head convex in front; face obtuse with a tawny disk: sides of the abdomen luteous: fore-wings with a black interrupted stripe near the hind border, and another more indistinct in the disk, hind-wings copperygray. Length of the body 5 lines; of the wings 11 lines.

a. Philippine Islands. From Mr. Wood's collection.

### 34. Tettigonia immaculata.

Crocea, nigro maculata; scutellum antice piceum; abdomen nigrum, apice ferrugineum; pedes rufescentes; femora posteriora nigro vittata; alæ anticæ subvittatæ; alæ posticæ luridæ.

Orange, slender, linear, tinged with white or bluish white bloom: head short, small, ascending to the fore border; face convex; underside with two black stripes which meet on the epistoma: chest partly yellow, with a black spot on each side near the fore border of the shield, and with three black spots on the hind border; the middle one larger and more distinct than the other two; scutcheon partly pitchy along the fore border: abdomen black, ferruginous towards the tip: legs reddish; posterior thighs striped with black: fore-wings with a short almost colourless stripe on the hind border

near the tip: hind-wings lurid; disks of some of the areolets paler. Length of the body 6 lines; of the wings 12 lines.

a. Quito. Presented by W. Hewitson, Esq.

### O 35. TETTIGONIA FUSCA.

Testacea; caput subtus nigrum; abdomen flavum, subtus apice nigrum; pedes ferruginei; femora flava; alæ anticæ apice ferrugineæ; alæ posticæ luridæ.

Testaceous, slender, linear; head broad, rather large, black beneath; face obtuse and rugulose on the disk, convex and with slight oblique furrows on each side, testaceous towards the base: chest slightly rugulose, roughly punctured, with a cross furrow near its fore border: abdomen yellow, black beneath towards the tip; valves mostly pitchy: legs ferruginous; thighs yellow: fore-wings roughly punctured, with ferruginous tips: hind-wings lurid. Length of the body 9 lines; of the wings 16 lines.

a. Columbia. From Mr. Turner's collection.

## 36. Tettigonia quadrimacula.

Straminea; caput subtus antice rufum; scutellum fulvum; pectoris discus cinereus; abdomen fulvum, nigro vittatum; pedes fulvi; alæ anticæ nigro trimaculatæ; alæ posticæ fuscæ.

Straw colour, slender, very slightly tapering from the chest to the tip of the abdomen: head rather small, conical above; face convex, reddish towards the epistoma, which is dark red: mouth pitchy: scutcheou tawny; disk of the breast gray: abdomen tawny, with a broad black dorsal stripe, which has a hoary tinge: legs tawny: fore-wings with a slight black streak near the base, and with two large black spots in the disk, the first irregular and interrupted, the second compact: hind-wings brown. Length of the body  $7\frac{1}{2}$  lines; of the wings 14 lines.

a, b. Columbia. From Mr. Turner's collection.

## 37. Tettigonia rufa.

Crocea; pedes fulvi, tibiis apice tarsisque piceis; alæ posticæ lacteæ.

Bright orange, slender, tapering from the chest to the tip of the abdomen: head small, short, semicircular above; face with a flat disk, with some impressions at the base, and with cross ridges along each side: mouth ferruginous: legs tawny; feet and tips of shanks pitchy: hind-wings milk white. Length of the body  $4\frac{1}{2}$  lines; of the wings 12 lines.

Var. β. Fore-legs black above.

a. b. Venezuela. From Mr. Dyson's collection.

### 38. Tettigonia vespiformis.

Lutea, nigro varia; metathorax niger, flavo bimaculatus; abdomen ferrugineum, fusiforme, segmentorum marginibus posticis flavis; femora flava; alæ anticæ luridæ, vittis duabus limpidis; alæ posticæ sublimpidæ, fusco marginatæ.

Luteous, slender: head smooth, shining, with a black band along the hind border, and a short black band between the eyes; face convex, with a black border, and with a black stripe on each side, where there are slight, parallel, and directly transverse striæ; epistoma black in front, and with a black spot on the disk; mouth ferruginous: chest with two black bands in front, the second irregular; behind it are three very short stripes, the middle one pitchy, the side pair black, oblique, and communicating with two longer black stripes, which diverge and are parallel to a quadrangular dorsal spot; behind them are two other black stripes converging towards the scutcheon, which has a black band and a yellow tip: hind chest black, with a yellow spot on each side: abdomen pale ferruginous, spindle-shaped; hind borders of the segments yellow: thighs yellow; fore-wings lurid, with two short colourless stripes, one on the fore border at the base, the other before the middle of the hind border: hind-wings almost colourless, tinged with pale brown along the borders. Length of the body 7 lines; of the wings 14 lines.

a. Parà. From Mr. Stevens' collection.

## O 39. Tettigonia pruinosa.

Purpureo-fusca; thorax fulvo varius; abdominis segmentorum margines ferruginei; pedes picei; alæ anticæ purpureæ, fulvo variæ, apice fulvæ; alæ posticæ cyaneo-fuscæ.

Allied to Proconia. Purplish brown: head above semicircular, slightly concave; face rather prominent, flat and minutely rugulose on the disk, convex, and with nine distinct slightly oblique ridges on each side: mouth ferruginous: chest transversely rugulose, somewhat tawny about the borders: breast mostly tawny: abdomen tapering from the base to the tip; borders of the segments mostly ferruginous: legs pitchy; knees ferruginous: fore-wings purple with pale tawny dots, and beyond the middle with pale tawny streaks also; tips pale tawny: hind-wings brown, tinged with blue. Length of the body 7 lines; of the wings 14 lines.

a, b. Columbia. From Mr. Turner's collection.

## O 40. TETTIGONIA GAUDENS.

Miniata; thoracis latera crocea; pectus et abdomen cinerea, hujus lateribus et segmentorum marginibus posticis fulvis; pedes nigri, femoribus posterioribus fulvis nigro vittatis; alæ anticæ incarnatæ, flavo trifasciatæ; alæ posticæ fulvæ, apice fuscæ.

Red-lead colour, slender: head short; face slightly flattened in front, paler on each side, without furrows or ridges: mouth ferruginous: chest orange on each side, not shining: breast and abdomen gray; sides and hind borders of the abdominal segments tawny: legs black; posterior thighs tawny, with black streaks: forewings crimson, with three broad bright yellow bands: hind-wings tawny with dark brown tips. Length of the body  $6\frac{1}{2}$  lines; of the wings  $13\frac{1}{2}$  lines.

a. Ega, on the Amazon. From Mr. Stevens' collection.

#### O 41. Tettigonia decora.

Atra; caput flavo unimaculatum, anticè luteum; thorax flavo quadrimaculatus; abdomen basi subtus luteum; pedes lutei; tarsi nigri; alæ anticæ maculis quinque cæruleis unâque flavâ ornatis.

Deep black, rather stout, slightly shining: head short, with a large yellow spot on the crown; face shining, quite flat on the disk, with about eleven oblique very slight furrows on each side; epistoma and mouth luteous: chest with a transverse pale greenish yellow spot on each side of the shield, and with a pale yellow irregularly triangular spot on each side of the scutcheon: abdomen luteous towards the base beneath: legs luteous; feet black: wings black; fore-wings with five pale greenish blue spots on each, and with a transparent very pale yellow spot near the tip of the fore border. Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

a. Ega, on the Amazon. From Mr. Stevens' collection.

### \$\mathread{\rho}\_{42}\$. Tettigonia cardinalis?

Atra; caput rufum, nigro varium; thorax rufo maculatus; metathorax ferrugineus; abdomen apice rufum; pedes rufi, tarsis fulvis; alæ fuscæ; alæ anticæ rufo fulvoque vittatæ.

Cicada Cardinalis? Fabr. Syst. Rhyn. 71, 46.

Deep black, not shining, rather short: head short, bright red; an irregular and angular black ringlet on the crown, including a subquadrate black mark which proceeds from the hind border; face flat, with two black stripes, which unite on the epistoma; sides tawny, with nine distinct oblique ridges: mouth pitchy: chest with two almost connected red spots on each side of the shield, and with a smaller red spot on each side of the scutcheon, which has a red stripe: hind-chest ferruginous: tip of the abdomen red: legs red; feet tawny: wings brown; fore-wings with red, and in some parts tawny stripes along the longitudinal veins: hind-wings with a metallic tinge. Length of the body  $3\frac{1}{2}$  lines; of the wings 10 lines.

a. Nepaul? Presented by Major General Hardwick.

## O43. TETTIGONIA GRANDIS.

Nigra, luteo varia; abdomen subtus flavum, nigro interruptè vittatum, apice ferrugineum; pedes fulvi; alæ fuscæ; alæ anticæ luteo vittatæ.

Black, slender, slightly shining: head short, with three luteous spots on the crown, the middle one conical; face flat, and finely rugulose on the disk, with ten oblique furrows on each side, where there is a large luteous spot; epistoma slightly keeled, almost angular, with a large luteous spot on each side: mouth pitchy: chest transversely rugulose, with four luteous spots on the fore border; behind these and partly connected with them are five oblong luteous spots, the two on each side oblique, and connected together in front; scutcheon with a large obconical interrupted luteous spot, which occupies the disk: abdomen yellow beneath, with an interrupted black stripe; tip ferruginous: legs tawny: wings dark brown; forewings with luteous stripes, which accompany all the veius. Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

a. Brazil. Presented by John Miers, Esq.
b. Brazil. Presented by J. P. G. Smith, Esq.
c. ——? Presented by J. G. Children, Esq.

### 9 44. Tettigonia confinis.

Lutea, nigro maculata; abdomen nigrum, lateribus et segmentorum marginibus posticis luteis; pedes nigro cincti; alæ anticæ nigro notatæ, apice nigræ; alæ posticæ fuscæ.

Luteous, rather slender: head short, with a round black spot between the eyelets, and another on the fore border; face black towards the tip, almost flat on the disk, with oblique, very slight furrows on each side; epistoma black at the base: mouth pitchy: chest with a small round black spot in front, and with a larger one on each side near the base of the fore-wing, and with one on the disk of the scutcheon, whose tip is black: abdomen black; sides and hind borders of the segments luteous: tips of the thighs, shanks, and feet black: fore-wings red, with some irregular black marks in the disk; tips black: hind-wings dark brown. Length of the body 6 lines; of the wings 12 lines.

a. ——?

## 45. Tettigonia intacta.

Testacea, fusiformis; facies flava; tarsi fusci; alæ posticæ albæ.

Bright testaceous, spindle-shaped, not shining: head short; face yellow, flat on the disk, shining, and with about nine very slight, hardly oblique furrows on each side; epistoma slightly keeled: mouth ferruginous: feet brown: hind-wings white; veins pale yellow. Length of the body 5 lines; of the wings 12 lines.

a, b. 'Columbia. From Mr. Turner's collection.

### 46. Tettigonia basimacula.

Lutea, nigro maculata; scutellum nigro fuscum, luteo maculatum; abdomen croceum; tibiæ anteriores tarsique fusca; alæ anticæ flavo trimaculatæ et univittatæ, apice fuscæ; alæ posticæ fuscæ.

Body rather slender, slightly shining: head luteous, short; crown with two short black bands, which are united by a black stripe, and with two round luteous spots, whose black borders are interrupted; face with two black stripes, which join the black on the crown, and are united on the epistoma; disk almost flat; each side with about twelve hardly oblique furrows; epistoma with a black stripe, slightly keeled: mouth ferruginous: shield blackish brown, with two very large transverse luteous spots on the fore border, extending to the breast, and having three luteous spots between them; two large transverse luteous spots on the hind border; scutcheon luteous, brown along the fore border, with the exception of a small luteous spot on each side: abdomen orange: feet and anterior shanks brown; fore-wings with three yellow spots at the base, and with a yellow stripe extending along the disk: tips and hind-wings brown. Length of the body 5 lines; of the wings 12 lines.

Var. β. Hind-shanks brown.

b. Brazil.

a. ——? Presented by the Entomological Club.

#### 47. TETTIGONIA OPULENTA.

Ferruginea; caput rufum, subtus utrinque fulvum; scutum flavo trifasciatum; abdomen rufum; pedes rufi, tarsis anterioribus fuscis; alæ anticæ purpureo-rufæ, flavo interruptè trifasciatæ, apice fuscæ; alæ posticæ fuscæ.

Ferruginous, shining, rather stout: head red, short; face flat and minutely rugulose on the disk, tawny, and with about eighteen pale brown bands on each side; epistoma angular: mouth brown, red on each side at the base; shield with three pale yellow bands; first on the fore border, short and narrow; second broad, very near the first; third narrow on the hind border, uniting on each side with the first, and extending to the breast: a slight yellow mark on each side of the shield: abdomen and legs bright red; anterior feet brown: fore-wings purplish red, with three slight irregular and interrupted yellow bands; tips and hind-wings brown. Length of the body  $4\frac{1}{2}$  lines; of the wings  $11\frac{1}{2}$  lines.

a. Venezuela. From Mr. Dyson's collection.

### O48. Tettigonia dilecta.

Crocea, testaceo varia; scutum postice purpureo fasciatum; tibiæ posticæ fuscæ; alæ anticæ luteæ, purpureo fasciatæ et vittatæ apice luridæ; alæ posticæ purpureo-fuscæ.

Orange, slender, shining: head testaceous, almost conical; crown somewhat depressed, with two orange stripes which converge, traverse the eyelets, and form an acute angle on the disk; sides partly orange; face with a flat disk, and with indistinct and oblique striæ on each side; epistoma partly orange: shield transversely striated, testaceous towards the fore border, with a purple band on the hind border: scutcheon testaceous towards the base: abdomen testaceous beneath and towards the base above; hind borders and hind-shanks brown: fore-wings luteous, with an oblique purplish red stripe near the base, and with two slightly oblique purplish red bands, these converge as they approach the hind border, along which the space between them is occupied by a purplish red stripe; tips lurid: hind-wings purplish brown. Length of the body 6 lines; of the wings 12 lines.

a. Ega, on the Amazon. From Mr. Stevens' collection.

### O49. TETTIGONIA LÆTA.

Ferrugineo-fusca, nigro varia; abdomen croceum, segmentorum marginibus posticis fuscis, ventre flavo; pedes flavi, femoribus anticis fusco strigatis, tibiis tarsisque anticis luteis, tibiis posticis apice fuscis; alæ anticæ luridæ, viridi et fusco variæ, apices versus limpidæ; alæ posticæ limpidæ.

Ferruginous brown, shining, rather stout: head short; crown black on each side, yellow along the hind border, and between the eyes and the eyelets on the fore border; face pale yellow, with two broad black stripes, which taper towards the epistoma; their outer sides serrated; epistoma black; a black stripe on each side extending between it and the eye: shield with a slender yellow band on the disk, and another on the hind border: scutcheon with a yellow band on the disk and with a yellow stripe on each side, extending from the base to the band; tip yellow: breast pale yellow, with a large black spot on each side: abdomen orange; hind borders of the segments brown; underside yellow: legs yellow; a brown streak on each fore-thigh; fore-shanks and fore-feet luteous; tips of hind shanks brown; fore-wings lurid, with a pale green streak on the hind border near the base; a large triangular dark brown spot rests on the fore border beyond the middle, and extends across the wing, and includes an oblique pale green streak; beyond it the wing is colourless, with a lurid tinge at the tip: hind-wings colourless. Length of the body  $4\frac{1}{2}$  lines; of the wings 11 lines.

a. Ega, on the Amazon. From Mr. Stevens' collection.

### 50. Tettigonia longipes.

Testacea; caput luteum; thorax luteo varius, scutelli disco rufo; abdomen flavum, nigro notatum; pedes flavi, tarsis fulvis; alæ albæ.

Testaceous, slender, shining: head luteous, conical; crown flat, with a semicircular depression in the disk; face flat on the disk, with indistinct slightly oblique ridges on each side; epistoma pale testaceous: mouth ferruginous: shield luteous along the fore border, and with a luteous band near the hind border: disk of the scutcheon red: abdomen mostly yellow, with some black marks: legs yellow; feet tawny: fore-wings whitish; veins luteous: hind-wings milk-white. Length of the body 5 lines; of the wings 12 lines.

a. Quito.

#### 51. TETTIGONIA CAUDATA.

Lutea; caput nigro varium, subtus flavum; thorax ferrugineus, luteo et flavo maculatus; metathorax niger; pectus flavum, piceo bimaculatum; abdomen rufum, nigro vittatum, subtus et apice flavum; alæ anticæ ferrugineæ, luteo guttatæ, apice luridæ; alæ posticæ luridæ, fusco marginatæ.

Luteous, rather stout: head almost truncate-conical; crown flat, somewhat concave on each side by the eyes, with a slender black discal band, which has three black stripes belind it, and two in front; face vellow; its disk flat, minutely rugulose lengthwise; sides convex, with about nine slight, hardly oblique ridges; tip and epistoma deep black: mouth yellow: hind part of the shield ferruginous, but mostly occupied by six luteous spots; scutcheon ferruginous, with four round luteous spots on the disk, with a yellow oblong spot on each side at the base, and with a large round yellow spot near the tip, which is luteous: hind-chest black: breast pale yellow, with a pitchy spot on each side: abdomen dark red, with a black dorsal stripe, bright red at the base, tip and underside pale yellow: fore-wings pale bright ferruginous, with numerous luteous dots of various size, lurid towards the tips, where there are some colourless streaks on the borders of the veins: hind-wings pale lurid, brown at the tips and along the hind borders. Length of the body 6 lines; of the wings 12 lines.

a. Bolivia. Presented by E. Doubleday, Esq.

## 52. TETTIGONIA STIPATA.

Rufa, robusta, flavo varia; thorax albo varius; metathorax nigro fasciatus; pedes nigro cincti; alæ anticæ luridæ, albo guttatæ, rufo marginatæ; alæ posticæ cupreo-fuscæ.

Bright red, rather stout: head short; crown semicircular, flat, with a heart-shaped pale yellow spot in the disk; face flat on the disk, convex, and with ten oblique pale yellow bands on each side: shield with some irregular yellow marks towards the fore border, which is white; a conical white spot near the fore border connected by a slender white stripe with the hind border, which has a conical white spot on each side: scutcheon whitish, with a large red spot on each side; tip black: hind-chest mostly yellow, with a short black band on the hind border: abdomen tinged with purple beneath:

thighs and shanks black towards the tips; feet partly black: forewings lurid, adorned with numerous white dots, bright red near the tips and thence for a short space along each border; fore border and hind border bright red, a purple tinge alongside the former: hindwings brown with a coppery lustre, paler along the fore borders. Length of the body 5 lines; of the wings 12 lines.

a. Quito. Presented by M. Bourcier.

53. Tettigonia trita.

Rufa, robusta; scutelli discus nigricans; abdomen nigro-purpureo vittatum, lateribus albo maculatis, ventre flavo apice rufo; tarsi apice nigri; alæ anticæ luridæ, basi et ad costam rufæ; alæ posticæ fuscæ.

Bright red, rather stout: head short; crown semicircular; face flat on the disk, with some slight, oblique ridges on each side; epistoma keeled: disk of the scutcheon blackish: abdomen with a purplish black stripe along the back, and with a whitish triangular spot on each side of every segment; underside pale yellow with a red tip; feet with black tips: fore-wings lurid, mostly red towards the base along the fore border till near the tips: hind-wings brown. Length of the body 5 lines; of the wings 10 lines.

a. Java. From the East India Company's collection.

#### 0 54. Tettigonia æstuans.

Crocea, robusta; thorax nigro bifasciatus; abdomen disco purpureo-rufum, basi testaceum et compressum; pedes picei, femoribus posterioribus flavis, tibiis intermediis fulvis; alæ anticæ ferrugineæ, croceo trifasciatæ, apice luridæ; alæ posticæ luridæ.

Saffron-colour, stout, shining: head short, broader than the chest; crown concave on the hind border, more convex, and with a black band in front; underside testaceous; face somewhat flattened, very finely rugulose, smooth, with indistinct striæ, and with pale brown, oblique bands on each side: mouth ferruginous; shield transversely striated, with two black bands, one on each border; scutcheon black towards the base: abdomen purplish red on the disk, testaceous and compressed towards the base: sheaths of the

oviduct serrated above: legs pitchy; posterior thighs yellow; middle shanks tawny; fore-thighs and fore-shanks with tawny streaks: fore-wings ferruginous, with three broad saffron bands; tips and hind-wings lurid. Length of the body 5½ lines; of the wings 11

a. West Coast of America.

b. ——?

55. TETTIGONIA GELIDA.

Testacea, pruinosa; thorax piceo trimaculatus; pectus piceum; abdominis discus nīgricans; tarsi fusci; alæ anticæ albæ, fascia interrupta apiceque fuscis; alæ posticæ fuscæ.

Testaceous, shining, rather stout, mostly covered with bluish white bloom: head short; crown somewhat depressed, almost conical, mostly black on each side; disk of the face quite flat, very minutely shagreened; sides with about twelve very slight oblique ridges; epistoma keeled, mostly pitchy: mouth ferruginous: shield with a pitchy spot on each side by the eye: breast and tip of the scutcheon pitchy: disk of the abdomen blackish; legs dark testaceous; feet brown: fore-wings white with an interrupted brown band at two-thirds of the length; tips brown, partly lurid: hindwings dark brown. Length of the body 6 lines; of the wings 11 lines.

a. Java. From Mr. Argent's collection.

## 56. TETTIGONIA FERVIDA.

Testacea, robusta; caput antice nigro fasciatum, subtus flavum; pectus flavum; abdomen flavum, supra nigrum segmentorum marginibus posticis luteis; pedes flavi; alæ anticæ rufæ, apice et ad costam luridæ, margine postico nigro triguttatæ; alæ posticæ fuscæ.

Testaceous, shining, rather stout: head short; crown flat, concave behind, more convex on the fore border, where there is a black band; face and epistoma yellow, quite flat: chest almost flat: breast yellow: abdomen black above, yellow beneath; hind borders of the segments luteous: legs yellow: fore-wings bright red, lurid along the fore borders and at the tips, with three black spots along the hind border: hind-wings dark brown. Length of the body 4 lines; of the wings 9 lines.

a. Columbia. From Mr. Turner's collection.

### 57. TETTIGONIA RUTILANS.

Nigra; caput ad os testaceum; pedes testacei, tarsis fuscis; alæ anticæ rufæ, apice nigræ; alæ posticæ fuscæ.

Black, smooth, shining, rather slender: head short; crown depressed; face flat, very minutely shagreened; sides convex, with alternate, smooth, and finely shagreened bands; epistoma towards the tip and mouth testaceous: legs dark testaceous; feet brown: fore-wings bright red, black towards the tips: hind-wings brown. Length of the body  $3\frac{1}{2}$  lines; of the wings 9 lines.

a. Brazil. Presented by John Miers, Esq.

### 58. TETTIGONIA SEMIVITTA.

Lutea, nigro-maculata; scutellum nigrum, disco rufum; abdomen nigro vittatum; pedes fulvi; alæ anticæ vittis duabus apiceque fuscis; alæ posticæ cupreo fuscæ, basi limpidæ.

Luteous, slightly shining, rather slender: head short: crown slightly depressed, with a slender black stripe, which on the fore border joins a transverse black spot, whence two black stripes proceed along near half the length of the face; disk of the face flat; sides with about nine slight, hardly oblique ridges: shield transversely striated, with a black spot on each side of the fore border, and on the hind border a black band which forms an angle in the middle; scutcheon black, with a red disk: abdomen with a blackish stripe: legs tawny: fore-wings with a brown stripe along more than half the length of the fore border, and with an oblique brown stripe passing from the base of the fore border to near the tip of the hind border; tips brown: hind-wings brown, somewhat coppery, colourless at the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 10 lines.

a. ---?

# 6 59. Tettigonia fusiformis.

Rufa, nigro varia; facies flava, nigro bivittata; abdomen nigrum; pedes flavi; tibiæ anticæ piceæ; alæ anticæ nigræ, rufo quadrivittatæ, apice fuscæ.

Bright red, slender, slightly shining: head short; crown tawny, with a black spot on each side of the hind border; face yellow, with

two broad black stripes, which also occupy part of the front, and are united on the epistoma; disk flat; striæ on each side very indistinct: shield black on each side, and on each side of the disk with two black spots, which are parted by a yellowish mark: scutcheon yellow; fore border with a black band, which is widened on each side: abdomen black: legs pale yellow; fore shanks pitchy, tawny at the base: fore-wings black, with four more or less perfect bright red stripes; tips, hind borders, and hind-wings brown. Length of the body 4 lines; of the wings 9 lines.

a. ——?

### 60. Tettigonia scita.

Flava; facies nigro trivittata; scutum nigro bifasciatum; abdomen luteum, apice fuscum; tibiæ anticæ luteæ; alæ anticæ albæ, fusco quadrimaculatæ.

Pale yellow, slender, shining: head short; crown slightly concave, with a black divided spot between the eyelets; face with three black stripes which extend along two-thirds of the length, and taper towards the epistoma, the side pair also occupy part of the front; disk almost flat; sides with slight oblique ridges: tip of the mouth tawny: shield with a short irregular black band on the fore border, and on the hind border a broad black band which forms an acute angle in the disk: abdomen luteous, pale yellow beneath and towards the tip, which is brown: fore shanks luteous: fore-wings white, with four brown spots, one near the base, the second on the hind border at one-third of the length, the third triangular in the middle of the disk, the fourth near the tip: hind-wings with a slight lurid tinge. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

### 61. Tettigonia albigutta.

Nigra; facies flavo bivittata; scutum flavo fasciatum; pectus flavo quadrimaculatum; abdomen purpureo-rufum; pedes rufi; alæ anticæ fuscæ, flavo-albo quinquemaculatæ.

Black, rather slender, shining: head short; face with two broad pale yellow stripes, which also occupy part of the front, and are united towards the epistoma; disk almost flat, very minutely

shagreened; sides with indistinct oblique striæ; epistoma with a yellow spot near the base, its sides, tip, and the mouth luteous: disk of the shield with a broad pale yellow band, which is notched in the middle of the hind border; breast with two large pale yellow spots on each side: abdomen bright red; disk above purplish: legs pale red: wings brown: fore-wings with five large yellowish white spots. Length of the body 4 lines; of the wings 9 lines.

a. Brazil.

## 62. Tettigonia plumbea.

Nigra, cyaneo-pruinosa; alæ anticæ nigro-fuscæ; alæ posticæ fuscæ.

Black, rather slender, not shining, mostly covered with a blueish bloom: head short; crown depressed on each side; disk of the face concave, minutely shagreened; sides convex, smooth, with indistinct oblique striæ: epistoma keeled: wings rather broad; fore-wings blackish brown: hind-wings brown. Length of the body 3—4 lines; of the wings 7—9 lines.

a-c. Quito. Presented by W. Hewitson, Esq.

## 63. Tettigonia brevifrons.

Nigra; caput supra fulvo uniguttatum; facies fulva; pedes picei; tibiæ posticæ subtus et coxæ fulvæ; alæ anticæ nigro-fuscæ; alæ posticæ fuscæ.

Black, slender, shining: head short; crown convex, with a tawny dot in front; face tawny and flat on the disk, convex on each side; epistoma keeled, tawny on each side: mouth and legs pitchy; hind-shanks beneath and hips tawny; fore-wings blackish brown: hind-wings brown. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a. Java. From the East India Company's collection.

### 64. Tettigonia pruinosa.

Testacea, albo-pruinosa; verticis latera picea; facies flavo unimaculata; sentum piceo aut flavo varium; abdomen nigrum, subtus piceo interrupte vittatum; tibiæ anticæ tarsique picea; alæ posticæ luridæ.

Testaceous, rather stout, covered with a white bloom: head short; crown pitchy on each side; face with a yellow spot on the disk, which is shinning; ridges on each side oblique, very distinct; epistoma keeled; shield roughly punctured; partly pitchy or yellow; abdomen mostly black above, with an interrupted pitchy stripe beneath: feet and fore-shanks pitchy: hind-wings lurid. Length of the body 5 lines; of the wings 9 lines.

a. Rio Janeiro. Presented by J. P. G. Smith, Esq.

### 0 65. Tettigonia concinna.

Miniata; vertex nigro fasciatus; pectus luteum; scutum nigro fasciatum; pedes lutei; alæ posticæ fuscæ.

Bright red-lead colour, shining, rather slender: head rather prominent; crown with a black angular band along the hind border; disk of the face almost flat; sides luteous, with indistinct, very oblique furrows; epistoma keeled, luteous, as are also the mouth and the breast: shield with a broad, slightly convex black band along the fore border: legs luteous: fore-wings wanting; hind-wings pale brown; a broad band and the tips darker. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a. ——?

### 66. TETTIGONIA CARA.

Flavo-alba; caput antice luteum; thorax fusco quadrimaculatus; abdomen croceum basi flavum; pedes fulvi; alæ anticæ albæ guttis tribus fasciisque duabus incarnatis.

Yellowish white, rather stout: head short; front, face, epistoma, and mouth luteous; disk of the face almost flat; furrows on each side oblique, not very distinct: shield with an oblong brown spot on each side of the fore border; scutcheon with a brown spot on each side; breast yellow: abdomen orange, yellow at the base: legs tawny: wings white; their tips and the fore-wings towards the base with a slight lurid tinge: fore-wings with three crimson dots, and two crimson bands; first band slender; second broad, oblique, not reaching the hind border. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a. Java. From Mr. Argent's collection.

#### 67. TETTIGONIA BADIA.

Testacea; caput fusco maculatum; scutum apice fuscum; scutellum fuscum, apice testaceum; pectus piceo bimaculatum; abdomen fuscum, testaceo fasciatum; tibiæ posticæ fuscæ; alæ anticæ testaceæ; alæ posticæ fuscæ.

Testaceous, rather stout, almost flat: head short; crown concave behind, semicircular in front, with two brown dots on the hind border behind the eyelets; face flat, with short indistinct furrows on each side; a pitchy spot by the corner of each eye: shield minutely striated across, darker towards the hind border which is brown: scutcheon brown with a testaceous tip: breast with a pitchy spot on each side: abdomen brown, dilated beneath towards the base; hind borders of the segments and tip beneath testaceous: hind shanks brown: fore-wings testaceous: hind-wings brown. Length of the body  $3\frac{1}{2}$  lines; of the wings  $7\frac{1}{2}$  lines.

a. North America. Presented by the Entomological Club.

### 68. Tettigonia albofasciata.

Crocea; caput flavo varium; scutum nigro-cupreum, flavo-albo fasciatum; pectus luteum; pedes lutei, piceo varii; alæ anticæ luridæ albo sex-maculatæ; alæ posticæ fuscæ.

Orange: head short, black, rather broader than the chest; crown depressed, with a row of pale yellow spots forming a band in the disk; face long, flat, finely shagreened, with a long pale yellow stripe in the middle; sides convex, shining, with distinct oblique furrows, tawny towards the eyes: mouth pitchy: shield cupreousblack, with a broad yellowish white band on the disk: breast and legs luteous; tips of the shanks and of the feet, fore-shanks and fore-feet pitchy: fore-wings lurid, with six white spots; the sixth forming a band almost across the wing and near the tip, which is brown: hind-wings brown. Length of the body 3 lines; of the wings 7 lines.

a. South America. Presented by E. Doubleday, Esq.

# 69. Tettigonia jucunda.

Crocea; scutum nigro varium; abdomen apice nigro bimaculatum; alæ anticæ fasciis duabus croceo maculatis apicibusque fuscis; alæ posticæ fuscæ.

Bright orange: head short; crown depressed, with a black band on the hind border, and another on the fore border, the latter irregular; disk of the face flat; furrows on the sides indistinct: shield black on each side and along the hind border, where the black is widened into an angle, which extends beyond the middle of the disk: abdomen black on each side towards the tip: fore-wings with two broad brown bands, each of which includes an oblong orange spot; tips and hind-wings brown. Length of the body 3 lines; of the wings 7 lines.

a. Honduras. From Mr. Dyson's collection.

### 70. Tettigonia sinensis.

Picea, aurata; caput flavum, nigro varium; thorax flavo confertim guttatus; pectus flavo varium; pedes fulvi, nigro vittati; alæ anticæ cupreo-luridæ.

Pitchy, gilded, shining, almost smooth: head yellow, very short, concave on the hind border, equally convex in front, where it is irregularly black; face conical, flat, tawny on each side: feelers about half the length of the body: chest crowded with yellow dots: many of them confluent: breast partly yellow: legs tawny; thighs and shanks striped with black: fore-wings lurid, adorned with coppery lustre: hind-wings grayish; veins black. Length of the body 3 lines; of the wings 7 lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

## 71. Tettigonia opponens.

Nigra; caput luteum, nigro unimaculatum et bivittatum; thorax luteo unifasciatus et unimaculatus; pedes flavi; alæ anticæ cinereæ, luteo trifasciatæ.

Black: head and chest slightly convex: head bright orange, concave along the hind border, more convex in front, adorned with

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two clavate black stripes, and with a black spot between the tips of the stripes; its length less than half its breadth; underside pale yellow; face oval, with a flat, pale orange disk; a black stripe along two-thirds of each side is united to a black stripe on the epistoma, the latter is keeled and slightly compressed: mouth pale yellow: chest with a broad orange band, which is half interrupted on the hind border, and is waved along the fore border, near each side of which it includes a little black cross streak; a large subquadrate orange spot, whose hind border is notched on each side, near the tip of the scutcheon, which is tawny: legs pale yellow: wings brownish gray; fore-wings gray, with three orange stripes; first and second united at the base; third hardly extending beyond the middle; veins brown. Length of the body  $2\frac{1}{4}$  lines; of the wings 6 lines.

a. North India. From Mr. Warwick's collection.

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#### 72. TETTIGONIA PICTA.

Fulva; caput et thorax nigro varia; thorax viridi fasciatus; pectus flavum; abdomen rufum, subtus flavum, apice nigrum; pedes flavi; alæ anticæ viridi-fuscæ, vittis una viridi duabusque luteis ornatæ.

Head tawny, flat, concave along the hind border, conical in front, where it has a black border; its length a little more than half its breadth; face convex, almost oval, nearly flat on the disk, on each side of which are ten indistinct oblique cross ridges; face pale yellow, keeled, slightly compressed: mouth tawny: chest tawny, with a very broad black band, which includes a ferruginous band; a narrow grass-green band along the fore border: breast pale yellow: abdomen very bright red, yellow beneath; tip tawny, compressed, black above: legs yellow: fore-wings greenish brown, with three stripes; first bright grass-green along the fore border; the second and third orange; veins green: hind-wings grayish brown; veins brown, tawny at the base. Length of the body 3 lines; of the wings 7 lines.

 $\mathbb{O}$  Var.  $\beta$ . Tip of the abdomen red.

a. —— ?

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#### 73. TETTIGONIA AMŒNA.

Nigrum; caput nigro unifasciatum et trivittatum; scutum flavo fasciatum; abdomen apice testaceum; pedes flavi, tibiis tarsisque anticis fulvis; alæ anticæ luridæ viridi bifasciatæ.

Black, shining: head luteous; crown almost semi-circular slightly concave on the hind border, with a broad black band sending forth three short black stripes to the front, where they are united; face rather large and swelling, shagreened, and almost flat on the disk, convex, shining, and with indistinct oblique striæ on each side; epistoma keeled: mouth pitchy: fore borders of the shield with a yellow band, which is widened on each side, and extends to the fore-hips: tip of the abdomen testaceous: legs yellow; fore-shanks and fore-feet tawny: fore-wings lurid, slightly gilded, with two pale green bands, one near the base, the other at two-thirds of the length? hind-wings coppery-brown. Length of the body 3 lines; of the wings 7 lines.

a. Venezuela. From Mr. Dyson's collection.

# 74. Tettigonia cephalotes.

Lutea; caput nigro varium; scutellum ferrugineum, apice flavo maculatum; pectus flavum, disco fulvo; abdomen subtus flavum; pedes flavi; alæ anticæ luridæ, basi et ad costam fuscæ, macula una viridi alteraque fulva ornatæ; alæ posticæ limpidæ apice fuscæ.

Luteous: head a little broader than the chest; crown flat, concave on the hind border, depressed on each side by the eye, with a black T-shaped mark in the disk; face yellow, rather large and swelling, with a broad black stripe, which on the front is united to a black band, the latter contains many yellow curved streaks; disk almost flat, minutely shagreened; epistoma black: shield bordered with black, and with some black impressions near the fore border; scutcheon ferruginous, blackish, and with a triangular yellow spot towards the tip: breast yellow; disk tawny: abdomen yellow beneath: legs yellow: fore-wings lurid, brown at the base and along the fore border, with a long pale dull green spot, which occupies the disk, and joins a tawny spot near the base: hind-wings colourless, with brown tips. Length of the body 3 lines; of the wings  $6\frac{1}{2}$  lines.

a. British Guiana. Presented by Sir R. Schomburgk.

V 75. Tettigonia multicolor.

Lutea; caput nigrum, flavo varium; thorax nigro flavoque varius; abdomen subtus flavum, apice piceum; pedes flavi; alæ anticæ luridæ, basi luteæ, ad costam rufæ, maculis duabus canis unaque flava ornatæ; alæ posticæ sublimpidæ, apice fuscæ.

Luteous, in structure like T. cephalotes: head black; crown with several tawny marks; front and sides of the disk of the face with yellow streaks; sides of the face yellow: fore part of the shield mottled with yellow and black; a black band on the hind border: breast yellow, with a black disk: abdomen mostly yellow beneath, pitchy towards the tip: legs yellow: fore-wings lurid, luteous at the base, dark red along near three-fourths of the fore border, with a large oblong hoary spot in the disk, and with a yellow spot on the fore border near the tip: hind-wings almost colourless, with pale brown tips. Length of the body 3 lines; of the wings  $6\frac{1}{2}$  lines.

a. Parà. Presented by Reginald Graham, Esq. b. ——?

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#### 76. TETTIGONIA CYANESCENS.

Cupreo-albida, nigro varia; abdomen basi apiceque nigrum; pedes nigri; alæ anticæ subglaucæ, fusco variæ; alæ posticæ sublimpidæ apice cinereæ.

Dingy white, with a coppery tinge: head short; crown concave behind, semicircular in front, depressed on the disk and on each side; three black spots on the front, side pair a little in advance of the middle one; face long, flat, with a club-shaped black spot in the disk, and with about twelve oblique indistinct striæ on each side; epistoma keeled, with a black stripe: mouth black: shield with a black spot in front, with a black band on the disk, and another on the hind border; scutcheon with black angles: abdomen black at the base and at the tip: legs black; hind-knees lurid: fore-wings with a glaucous tinge, dark brown on one-fourth from the tips, with dark brown borders, and with an oblique dark brown stripe, which proceeds from the base, and joins a dark brown band in the middle; or, dark brown, with two long and one round whitish spots: hind-wings almost colourless, with gray tips. Length of the body 3 lines; of the wings  $6\frac{1}{2}$  lines.

a. Venezuela. From Mr. Dyson's collection.

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#### 77. Tettigonia decorata.

Atra; caput flavo varium; scutum albido bimaculatum; scutellum luteo trimaculatum; pectus albido maculatum; abdomen maculis subtus apiceque luteis; pedes crocei, piceo varii; alæ anticæ albido trivittatæ et unimaculatæ; alæ posticæ subfuscæ.

Deep black: head short; crown semicircular in front, concave on the hind border, with a luteous spot in the middle, and two pale yellow spots on each side; disk of the face almost flat, yellow, with a black spot in the middle, and with some black streaks along the sides; epistoma yellow, black towards the tip: mouth pitchy: shield with a large whitish spot on each side: scutcheon with three luteous spots, a small one on each side, and a larger one in front: breast with whitish spots: abdomen beneath with luteous spots along each side; tip luteous, much keeled in the female: legs orange: anterior thighs with pitchy streaks; anterior shanks and feet pitchy; hind-feet pitchy, tawny at the base: fore-wings with three whitish stripes; first on the fore border, short; second on the hind border, longer; third on the disk, longer than the second, and extending to a transverse whitish spot near the tip: hind-wings brownish. Length of the body 3 lines; of the wings 7 lines.

a, b. Quito. Presented by W. Hewitson, Esq.

# 78. TETTIGONIA EXTREMA.

Flava; caput luteum, nigro unimaculatum; scutum nigro trimaculatum; scutellum et abdomen nigra; pedes lutei; alæ anticæ nigro-fusco bivittatæ; alæ posticæ fuscæ.

Yellow: head luteous, short; crown semicircular in front, hardly concave on the hind border, with a slight keel on the disk, which is mostly occupied by a large black spot; face smooth, shining, with a slight keel, and on each side with indistinct oblique striæ: shield with an obconical black spot in the middle, and with a rounded black spot on each side: scutcheon and abdomen black: legs luteous: hips yellow: fore-wings with two irregular blackish brown stripes in the disk: hind-wings dark brown. Length of the body 3 lines; of the wings  $6\frac{1}{2}$  lines.

a. North India. From Mr. Warwick's collection.

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#### 79. Tettigonia crassa.

Atra; caput flavo luteoque varium; scutum flavo bimaculatum; scutellum luteo unimaculatum; pectus flavo maculatum; abdomen subtus luteum, nigro fasciatum; femora crocea, anteriora apice nigra; alæ anticæ flavo-albo quinquemaculatæ; alæ posticæ fuscæ.

Deep black, stout: head short; crown semicircular in front, concave on the hind border, with an oblong luteous spot in the middle, and a small yellow spot on each side of the hind border by the eye, between which and the eyes there is a large yellow spot; disk of the face luteous, flat, with a rhomboidal black spot in the middle; epistoma with a luteous spot on each side: mouth pitchy: shield with an elliptical transverse yellow spot on each side; scutcheon with a luteous spot in the disk: breast adorned with yellow spots: abdomen luteous beneath, with a black band on each segment: thighs orange; tips of anterior thighs black: fore-wings with five more or less oblong yellowish white spots: hind-wings brown. Length of the body 3 lines; of the wings 7 lines.

a, b. Columbia. From Mr. Turner's collection.

### 80. Tettigonia subflava.

Nigro-cyanea, subtus flava; abdomen apice subtus nigrum; pedes flavi; alæ anticæ maculis quatuor pallidis; alæ posticæ fuscæ.

Deep bluish black, bright yellow beneath: head conical; crown depressed, concave on the hind border; face long, with a flat disk, and on each side with indistinct oblique striæ: tip of the mouth luteous: abdomen rather attenuated; underside black towards the tip: legs bright yellow: fore-wings brown towards the tips; two spots on the hind border, one pale yellow near the base, the other white at two-thirds of the length; beyond these on the fore border there is an oblique white spot, and still nearer the tip a small tawny spot: hind-wings brown. Length of the body 3 lines; of the wings 7 lines.

a. Venezuela. From Mr. Dyson's collection.

O 81. Tettigonia ruficauda.

Piceo-rufa, viridi varia; abdomen rufum, basi nigrum; pedes rufi, nigro varii; alæ anticæ viridi confertim maculatæ, fascia limpida, apice fuscæ; alæ posticæ fuscæ.

Pitchy red: head short; crown very short, slightly concave on the fore border and on the hind border, adorned with greenish stripes; face occupying part of the upper side, long, flat on the disk, with numerous oblique greenish or tawny streaks on each side, along which there is a red stripe: mouth pitchy: chest mottled with green: abdomen bright red, black towards the base: legs red; fore legs black; posterior shanks and feet black, the former red towards the base: fore-wings crowded with round greenish spots, many of which are confluent; hind border near the tip brown; a colourless band close to the tip, which is dark brown: hind-wings brown. Length of the body 3 lines; of the wings 7 lines.

Var.  $\beta$ . Fore-thighs and posterior shanks and feet red. a-c. Brazil. Presented by John Miers, Esq.

d. Brazil. Presented by J. P. G. Smith, Esq.

82. Tettigonia rubriguttata.

Flavo-fusca, rufo vittata; caput fulvo bimaculatum; pectus fulvum; abdomen rufum, subtus basi luteum; pedes fulvi; alæ anticæ fuscæ, maculis duodecim incarnatis ornatæ; alæ posticæ flavo-fuscæ.

Yellowish brown: head conical; crown flat, slightly concave on the hind border, with a red stripe, and on each side with a tawny spot between the eyelet and the eye; face luteous, large, slightly prominent, almost flat on the disk, with indistinct oblique striæ on each side: shield with three red stripes; scutcheon red towards the tip: breast tawny: abdomen red, luteous towards the base beneath: legs tawny: fore-wings brown, adorned with about twelve crimson spots of various shape: hind-wings yellowish brown. Length of the body  $2\frac{3}{4}$  lines; of the wings 6 lines.

a, b. West Coast of America.

## 83. Tettigonia leucomelas.

Nigro-ænea; caput flavo fasciatum et vittatum; scutum albido fasciatum; scutellum flavo unimaculatum; abdomen luteum, basi nigrum; pedes flavi; tibiæ posticæ apice nigræ; tarsi picei; tarsi postici flavo fasciati; alæ anticæ nigro-cupreæ, viridi-albo bimaculatæ, ad costam rufo-luridæ, apice fuscæ; alæ posticæ fuscæ.

Brassy-black, shining: head short; crown slightly convex, concave on the hind border, along which there is a pale yellow band which joins a pale yellow stripe, extending along each side of the face to the epistoma; disk of the face finely shagreened, slightly convex: mouth brown: shield with a whitish band along the hind border; a pale yellow spot on the scutcheon: abdomen luteous, partly black towards the tip: legs yellow; tips of hind-shanks black; feet pitchy; a broad yellow band on each hind-foot: forewings coppery-black, lurid, and partly red along the fore border; tips brown; two oblong, oblique, greenish white, sometimes interrupted, spots on the disk: hind-wings brown. Length of the body  $2\frac{1}{2}$  lines; of the wings  $5\frac{1}{2}$  lines.

a. Brazil. Presented by John Miers, Esq.

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#### 84. TETTIGONIA TELIFORMIS.

Rufa; caput luteum, anticè nigro marginatum, subtus flavum; scutum viride, rufo fasciatum; abdomen subtus basi flavum; pedes lutei; femora flava; alæ anticæ virides, rufo bivittatæ; alæ posticæ fuscæ.

Head luteous, rather long, flat and conical above, bordered with black in front of the eyes, pale yellow beneath like the breast; face almost flat on the disk, convex and with six slight oblique ridges on each side: shield deep green, with a red band near the fore border, which is yellow; scutcheon red: abdomen bright red, yellow beneath towards the base; legs luteous; thighs yellow: forewings deep green with two bright red stripes; veins yellow: hindwings dark brown. Length of the body  $3\frac{1}{2}$  lines; of the wings  $6\frac{1}{2}$  lines.

- a. Trenton Falls, New York. Presented by the Entomological Club.
- b, c. Trenton Falls, New York. Presented by E. Doubleday, Esq.

#### 85. Tettigonia viridescens.

Flava; caput nigro varium; scutum viride, flavo marginatum; scutellum luteum, fusco notatum; abdomen supra croceum; alæ anticæ ferrugineæ, ad costam testaceæ; alæ posticæ fuscæ.

Head yellow, as are also the breast and the underside of the abdomen, conical and almost pointed above, with a slight black longitudinal ridge, on each side of which it has black labyrinth-like tracings, which converge towards the tip; a black band along the edge in front of the eyes beneath: tip of the mouth pitchy: shield deep green, yellow on each side and along the fore border; scutcheon luteous, figured with brown: abdomen orange above: legs yellow: fore-wings ferruginous, testaceous along the fore border and near the tip along the hind border; hind-wings brown, almost colourless beneath the fore border towards the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 6 lines.

a. Venezuela. From Mr. Dyson's collection.

## 86. Tettigonia pallipes.

Testacea; caput notatum, rufo fasciatum; scutum plumbeum, rufo fasciatum; scutellum apice luteum; pectus flavum; abdomen fuscum, subtus flavum; pedes flavi; alæ anticæ plumbeæ, rufo trivittatæ; alæ posticæ subfuscæ.

Testaceous: head flat and almost conical above, concave along the hind border, with a brown spot on each side about the eyelet, and with a pale red band along the fore border; face rather long, flat on the disk, with a black dot, and on each side with some slight black streaks adjoining the front: shield lead-colour, adorned along the fore border with a pale red band, which is interrupted by a testaceous interval; tip of the scutcheon luteous; disk of the abdomen brown above: breast, legs, and underside of abdomen yellow: forewings lead-colour, adorned with three pale red, slightly oblique stripes, very pale brown along the fore borders and at the tips: hindwings very pale brown. Length of the body 3 lines; of the wings 6 lines.

a-c. Brazil. Presented by John Miers, Esq.

### 87. TETTIGONIA RUFICAPUT.

Viridis; caput fulvum, fusco varium, rufo fasciatum; scutum rufo bimaculatum; scutellum viridi-fulvum; pectus et abdomen testacea; pedes fulvi; alæ anticæ ad costam rufæ; alæ posticæ cupreo-fuscæ.

Head rather short, tawny, flat and slightly conical above, minutely mottled with brown, and with a slight brown stripe adorned with a broad undulating bright red band along the fore border; face luteous, long, almost flat on the disk, convex on each side: shield deep green, mostly luteous along the fore border, with a bright red spot on each side: scutcheon greenish tawny: breast and abdomen testaceous, the latter pale yellow beneath: legs tawny: fore-wings deep green, bright red along the fore border: hind-wings copperybrown. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

a. Columbia. From Dr. Cuming's collection.

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#### 88. Tettigonia attenuata.

Testacea, fusco varia; pedes flavi; alæ anticæ rufæ, posticæ flavescentes; alæ posticæ fuscæ.

Testaceous: head short, rounded in front, not conical, with a slight cross ridge which divides the crown from the front; crown with two large ferruginous spots, which are narrower towards the fore border; front with two small, almost united ferruginous spots; and on each side with a larger brown spot; face brown and flat on the disk, and on each side with an oblique brown stripe, which is traversed by about nine slight, oblique ridges; epistoma with a triangular brown spot: chest figured with brown: breast and legs pale yellow: fore-wings red, yellowish along part of the hind border: hind-wings brown. Length of the body  $2\frac{3}{4}$  lines; of the wings  $5\frac{1}{2}$  lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

## 89. Tettigonia ignota.

Flava, rufo vittata; abdomen supra et scutellum rufa; alæ fuscæ; alæ anticæ maculis decem rufis limpidisque nonnullis ornatæ.

Yellow: head conical, of moderate length, concave along the hind border, flat above, with two broad red stripes, which are nar-

rower towards the fore border; face long, almost flat on the disk: shield testaceous, with three red stripes; scutcheon red: abdomen red above: fore-wings dark brown, with ten bright red spots on each, and at the tips with two or three colourless spots: hind-wings brown. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

a. ——?

### 90. Tettigonia intensa.

Viridissima, nigro vittata; caput flavum; scutum flavo fasciatum; scutellum flavum; abdomen viridi-flavum; pedes ferruginei; alæ anticæ ad costam flavæ; alæ posticæ fuscæ.

Intense green: head yellow, conical, concave along the hind border, flat above, and adorned with black stripes, which diverge from the tip; outermost pair extending to the eyes; next pair short; third forked at half the length; middle one forked, and its forks also shortly furcate; face flat on the disk, with indistinct streaks on each side; epistoma brown towards the tip: shield with a broad, yellow band along the fore border, adorned with eleven slender slightly undulating black stripes continued from those on the head: scutcheon yellow, with a transverse furrow, adorned with six straight black stripes, the innermost pair forked: disk of the breast pitchy: abdomen greenish yellow: legs ferruginous; fore-wings veined with black, yellow along the fore borders till near the tips, which are brown: hind-wings dark brown. Length of the body  $2\frac{3}{4}$  lines; of the wings 5 lines.

a. Jamaica. From Mr. Gosse's collection.

591. Tettigonia albida.

Flavo-alba; alæ albidæ.

Very pale yellow: head short, conical, flat above, almost straight along the hind border; face flat on the disk, with indistinct, oblique ridges on each side: dorsal abdominal segments with a puncture on each side: legs yellowish white: wings white. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

a. Port Natal. From M. Gueinzius' collection.

#### 92. Tettigonia prasina.

Viridis; caput flavum, nigro vittatum; scutum flavo fasciatum; scutellum, pectus, abdomen et pedes flava; alæ anticæ ad costam alæque posticæ limpidæ.

Deep green: head yellow, slightly pointed, flat and almost triangular above, with a rim in front; hind side concave; fore sides slightly convex; an impression on each side by the eyelet; a black spot adjoining the front of each eye; two brown dots on the tip; five black streaks on the disk, the two on each side diverging; face flat on the disk, convex, and with about nine slight, oblique ridges on each side; epistoma slightly keeled: mouth tawny: a broad yellow band along the fore border of the shield; scutcheon mostly yellow: breast, abdomen and legs bright yellow: fore-wings colourless along the fore borders and towards the tips; veins yellow; hind-wings colourless. Length of the body 3 lines; of the wings 6 lines.

a-c. Hudson's Bay. Presented by G. Baruston, Esq.

### 93. Tettigonia viridis.

Tettigonia viridis, Fall. Cic. 28, 4. Germ. Mag. Ent. iv. 72, 25. Burm. Handb. Ent. ii. 1, 118, 4. Herr.-Schaff. Nom. Ent. 110.

Cicada viridis, Linn. Faun. Suec. 896. Syst. Nat. ii. 711, 46. Ray. Ins. 68, 3. Petiv. Gazoph. 73, pl. 76, f. 6. Fuessl. Ins. Helv. 24, 465. Geoff. Ins. i. 417, 5. Fabr. Sp. Ins. ii. 32, 6, 26. Mant. Ins. ii. 271, 34. Ent. Syst. iv. 37, 42. Syst. Rhyn. 75, 65. Panz. Faun. Germ. xxxii. 9. Fall. Act. Holm. 1806, 15, 6. Zett. Ins. Lapp. 520, 5.

Amblycephalus viridis, Curt. Brit. Ent. 572, 1.

Tettigonia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 197, 431, f. 75, 76.

Cicadella viridis, Crochard, Ed. Règn. Anim. pl. 99, f. 6.

a—k. England.

l, m. Scotland. Presented by E. Doubleday, Esq.

n. Ukraine. Presented by Dr. Dowler.
o. ——? Presented by J. G. Children, Esq.

p, q. Italy.

### 94. TETTIGONIA ARUNDINIS.

Tettigonia Arundinis, Germ. Mag. Ent. iv. 71, 24. Burm. Handb. Ent. ii. 1, 118, 5.
Melaneura, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 198, 432.

Europe.

#### 95. Tettigonia herbida.

Lutea; caput fusco quadrivittatum; scutellum viride; abdomen supra nigrum; alæ anticæ virides; alæ posticæ fuscæ.

Luteous: head rather short, almost triangular, with an impression on each side between the eye and the eyelet, very concave along the hind border, slightly pointed, with four oblique slightly enrved brown stripes on each side in front; face flat on the disk, with eight oblique brown stripes on each side: scutcheon tinged with green towards the hind border: abdomen black above excepting the tip, blackish beneath towards the base: fore-wings tinged with green: hind-wings brown. Length of the body 2 lines; of the wings 4 lines.

a. North America. Presented by the Entomological Club.b. Hudson's Bay. Presented by G. Barnston, Esq.

b. Hudson's Bay. Presented by G. Barnston, Esq. c-g. Nova Scotia. From Lieut. Redman's collection.

#### 96. Tettigonia similis.

Viridissima; caput flavum, nigro varium; scutum anticè flavescens, nigro guttatum; pectus et pedes flava; abdomen nigrum; alæ anticæ apice et ad costam limpidæ; alæ posticæ fuscæ.

Intense green: head yellow, rather short, slightly conical, concave along the hind border, figured with black lines, which are thus disposed; a stripe in the middle, forked in front, where it forms the hind side of a triangle, whose other sides are formed by a part of a curved and irregular band; a ringlet on each side of the stripe, and a few dots nearer each eye; four oblique bands united in pairs at their inner ends on each side in front of the triangle; face black, with yellow, oblique bands on each side, these towards the epistoma are shortened and interrupted, and are lastly mere dots; epistoma black, with a large yellow spot on each side: mouth tawny: fore

part of the shield yellowish, with black dots: breast and legs yellow: abdomen black, yellow beneath on each side and towards the tip: fore-wings colourless along the fore border and at the tips: hind-wings brownish. Length of the body 2 lines; of the wings 4 lines.

a. North America.

#### 97. Tettigonia tenella.

Nigra; caput flavo varium, subtus ferrugineum nigro vittatum; scutum nigro-æneum, flavo trifasciatum; scutellum flavum, nigro maculatum; pectus et abdomen picea, hoc flavo bivittatum; alæ anticæ flavo octo-vittatæ; albæ posticæ fuscæ.

Black, shining: head very short, rounded in front, with a yellow band along the concave hind border, and in front another which is divided, and incloses a triangular space on each side; two black dots on the fore border; face and epistoma ferruginous, with a black stripe, which is widened in front; two yellow streaks on each side of the face; mouth yellow, with a pitchy tip: shield brassy black, with a yellow curved band, and with two dingy yellow, straight bands, one on the disk, the other along the hind border: scutcheon yellow, with a black, transverse spot on the disk: breast and abdomen pitchy, the former with a short yellow stripe on each side: forewings with eight yellow stripes, brown towards the tips: hind-wings brown. Length of the body  $1\frac{3}{4}$  line; of the wings  $3\frac{1}{2}$  lines.

a. North America. Presented by the Entomological Club.

### 98. Tettigonia innotata.

Flava; scutum ferrugineo fasciatum, nigro unimaculatum; abdomen supra fuscum; alæ anticæ virides, apice et ad costam limpidæ; alæ posticæ limpidæ.

Yellow: head wanting: shield with a broad ferruginous band in the disk, and with a black spot in front, where it joins the head: abdomen brown above: fore-wings grass-green, colourless along the fore border and towards the tips: hind-wings colourless. Length of the body 2 lines; of the wings 4 lines.

a. Brazil. Presented by John Miers, Esq.

99. Tettigonia angulifera.

Flava; caput trigonum, nigro vittatum, subtus fusco vittatum; scutum viridi fasciatum; abdomen supra nigrum; alæ anticæ virides, apice et ad costam albæ; alæ posticæ limpidæ.

Yellow: head triangular, broader than long, forming an acute angle in front, concave along the hind border, with a black stripe, on each side of which are two black, oblique streaks, the inner pair curved, the outer pair terminating in two black spots, beyond them are two short, angular stripes; front with four oblique brown stripes on each side; face flat on the disk, with ten oblique pale brown stripes on each side: shield with a very broad green band along the hind border: abdomen black above: fore-wings grass-green, white along the fore borders and at the tips: hind-wings colourless. Length of the body  $3\frac{1}{2}$  lines; of the hind-wings 6 lines.

a, b. Newfoundland. Presented by W. C. St. John, Esq.

100. Tettigonia antica.

Flava; caput trigonum, fusco vittatum, scutum viridi fasciatum; pectus testaceum, fusco bivittatum; abdomen supra nigricans; pedes testacei; alæ anticæ virides, apice et ad costam limpidæ; alæ posticæ limpidæ.

Yellow: head triangular; hardly broader than long, slightly concave along the hind border, with a very slight black stripe, and on each side with a few oblique, indistinct, brown streaks; face buff, long, flat on the disk, with nine oblique brown stripes on each side: shield with a broad green band, occupying more than half the length, very convex in front, and occasionally truncate-conical: breast buff, with a brown stripe on each side: abdomen blackish above: legs buff: fore-wings grass-green, colourless along the fore borders and at the tips; veins yellow: hind-wings colourless. Length of the body 3 lines; of the wings 6 lines.

a, b. Trenton Falls, New York. Presented by Edward Doubleday, Esq.

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#### 101. TETTIGONIA MINOR.

Viridis; caput trigonum, flavum, nigro vittatum; scutellum flavum; pectus et abdomen nigra; pedes fulvi; femora postica nigra; alæ anticæ apice et ad costam limpidæ; alæ posticæ subfuscæ.

Grass-green: head yellow, triangular, a little broader than long, very concave along the hind border, with a black stripe, on each side of which are some oblique brown streaks; face black, with a flat disk: shield yellowish along the fore border; scutcheon yellow: breast and abdomen mostly black: legs tawny; hind-thighs black, with tawny tips: fore-wings colourless along the fore borders and at the tips: hind-wings pale brown. Length of the body  $2\frac{1}{4}$  lines; of the wings 4 lines.

a. United States. Presented by E. Doubleday, Esq.

### 102. Tettigonia producta.

Flava; caput trigonum, fusco vittatum; scutum viridi maculatum; pectus et abdomen ad discos nigra; pedes fulvi; femora fusco vittata; alæ anticæ virides, apice et ad costam limpidæ; alæ posticæ fuscæ.

Yellow: head triangular, slightly concave along the hind border, lengthened in front, a little longer than broad, with a very slight black stripe, and on each side with a short, more distinct, oblique brown stripe; face tawny, with eight oblique brown stripes on each side; disk flat, with a dark brown stripe, which is widened towards the epistoma: shield with a very large conical green spot resting on the hind border: disk of the breast black: abdomen black, yellow along each side and on the hind borders of the segments and at the tip: legs tawny; thighs streaked with brown: fore-wings grass-green, colourless along the fore borders and at the tips; veins pale bluish green: hind-wings brown. Length of the body  $2\frac{1}{2}$  lines; of the wings  $4\frac{1}{2}$  lines,

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

## 103. Tettigonia acuta.

Viridis; caput trigonum, flavum, nigro vittatum; scutum flavum, viridi maculatum; scutellum et pectus flava; abdomen nigrum, subtus flavum; pedes fulvi, femoribus flavis; alæ anticæ apice et ad costam limpidæ; alæ posticæ fuscæ.

Grass-green: head yellow, triangular, a little longer than broad, slightly concave along the hind border, with a very slender black stripe, and on each side some more indistinct brown streaks; face tawny, flat on the disk, with eight oblique pale brown stripes on each side: shield yellow, with a very large green conical spot resting on the hind border, and occupying more than half the length; scutcheon and breast yellow: abdomen black, yellow beneath: legs tawny; thighs yellow: fore-wings colourless along the fore borders and at the tips; veins bluish green: hind-wings brown. Length of the body  $2\frac{1}{2}$ —3 lines; of the wings 4—5 lines.

a—f. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

g. North America.

#### 104. Tettigonia 7-guttata.

Straminea; caput trigonum, fusco vittatum, nigro guttatum; scutellum nigro biguttatum; alæ anticæ sublimpidæ, ad costam flavæ; alæ posticæ albæ.

Straw-colour: head triangular, a little longer than broad, slightly concave along the hind border, with a few very slight brown stripes, and with three black dots, one on the disk and two on the hind border: face long, flat on the disk, darker, and with seven oblique brown stripes on each side: shield with some short brown streaks along the fore border, and with a black dot on each side; scutcheon with a black dot on each side of the fore border: forewings almost colourless, yellow along the fore border; veins whitish: hind-wings white. Length of the body 3 lines; of the wings 5 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

#### 105. Tettigonia 4-plagiata.

Nigra, flavo varia; pectus flavum; abdomen rufum; pedes flavi; alæ fuscæ; alæ anticæ virides albo bimaculatæ.

Black: head short, semicircular in front, concave behind, with a large conical pale yellow spot on the hind border; two yellow stripes on the fore border, extending to the face, which is all yellow, and has a flat disk; epistoma keeled: a large pale yellow spot on the shield, and a small one on each side of the scutcheon: breast and legs yellow: abdomen bright red: wings brown: forewings with two large greenish white spots, one on the fore border near the tip, the other on the hind border near the base. Length of the body 2 lines; of the wings 4 lines.

a. W. Coast of America. Presented by Capt. Wood and Lieut. Wood.

### 106. TETTIGONIA BREVIS.

Nigra; caput supra testaceum; pectus testaceo marginatum; abdominis segmenta marginibus posticis testaceis; pedes picei, femoribus nigris; alæ anticæ flavo bifasciatæ; alæ posticæ fuscæ, fascia sublimpida.

Black, broad: crown of the head testaceous, very finely striated, with an indistinct longitudinal ridge, impressed on each side near the hind border; face flat, extremely minutely shagreened, with a few small shallow punctures; a testaceous spot by each feeler; epistoma slightly keeled; mouth testaceous; shield roughly punctured: scutcheon minutely punctured, slightly striated across, with a transverse suture towards the tip, which is yellow: borders of the segments of the breast and hind borders of the abdominal segments testaceous: legs pitchy; thighs black; hind-shanks with black tips; hind-legs long: fore-wings black, with two bright yellow bands: hind-wings brown, with a triangular, almost colourless band. Length of the body 3 lines; of the wings 6 lines.

a. China. Presented by G. T. Lay, Esq.
b—d. Hong Kong. Presented by J. C. Bowring, Esq.

## 0<sub>107</sub>. Tettigonia striata.

Nigra, flavo guttata; pectus flavo bivittatum; alæ anticæ rufo vittatæ, apice sublimpidæ; alæ posticæ subcinereæ, basi subfuscæ.

Black, stout: head and chest thickly and roughly punctured, almost flat, thinly covered with yellow dots: head rounded in front; its length much less than half its breadth; face flat and finely rugulose on the disk, smooth, and with about twelve distinct oblique ridges on each side: scutcheon with a suture across the middle: breast with a pale yellow stripe on each side: abdomen with some yellow marks at the tip: fore-wings black, red along the fore border, and with two red stripes in each areolet; tips almost colourless, with a brown stripe on the disk of each areolet; hind-wings slightly gray, pale brown towards the base. Length of the body  $3\frac{1}{4}$  lines; of the wings  $7\frac{1}{2}$  lines.

a, b. Hudson's Bay. Presented by G. Barnston, Esq.
c, d. N. America. Presented by the Earl of Derby.
e. ——? Presented by J. G. Children, Esq.
f.—k. Nova Scotia.
l. ——?

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#### 108. Tettigonia lugens.

Nigra, albo guttata; pectus albo bivittatum; alæ anticæ albidæ piceo vittatæ; alæ posticæ cinereæ, basi fuscæ.

In structure like T. rufistria, of which it may be a variety. Black: head and chest thinly covered with white dots: breast with a white stripe on each side: abdomen whitish at the tip; fore-wings dingy white; disks of the areolets, excepting those along the fore border, irregularly and interruptedly pitchy: hind-wings gray, brown towards the base. Length of the body 3 lines; of the wings  $6\frac{1}{2}$  lines.

a. Nova Scotia.

#### O 109. Tettigonia pyrrhotelus.

Nigra, flavo guttata, subtus albo bivittata; caput margine antico flavo; scutellum apice flavum; abdomen apice rufum; femora rufa, nigro vittata; alæ anticæ rufo vittatæ, apice sublimpidæ; alæ posticæ fuscæ.

In structure like T. striata. Black: head and chest thinly covered with pale yellow dots: a pale yellow undulating band on the

fore border of the head: scutcheon with a yellow tip: a white stripe along each side of the breast and of the abdomen, which has a bright red tip: thighs red, striped with black: fore-wings black, red along the fore border, and with two red stripes in each areolet; tips almost colourless: hind-wings brown. Length of the body  $3\frac{1}{4}$  lines; of the wings  $7\frac{1}{2}$  lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

#### 110. TETTIGONIA NIGRIFASCIA.

Albida; caput margine antico nigro trimaculatum; scutum nigro bimaculatum; scutellum apice nigrum; abdominis dorsum nigrum, apice flavum; alæ anticæ ad costam nigricantes; alæ posticæ cinereæ, basi fuscæ.

Whitish, rather broad: head short, nearly as broad as the chest, rounded in front, slightly concave along the hind border, somewhat concave on the disk of the crown, with a black dot and two black spots in front; face finely punctured and slightly concave on the disk, with indistinct and slightly oblique striæ on each side: shield transversely rugulose, with two black spots near the fore border, which is yellow along each side; scutcheon with a black tip: abdomen bright yellow, pale testaceous at the tip, black above on full half the length from the base: fore-wings blackish along near three-fourths of the fore border from the base: hind-wings gray, brown towards the base. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Mexico. Presented by E. P. Coffin, Esq.

#### U 111. Tettigonia pallida.

Albida; caput margine antico nigro trimaculatum; scutum nigro bimaculatum; scutellum flavum, nigro trimaculatum; abdominis latera flava; alæ anticæ ad costam nigricantes; alæ posticæ albæ.

Whitish, rather broad: head short, nearly as broad as the chest, rounded in front, slightly concave along the hind border, finely striated longitudinally, not concave on the disk, with three small black spots on the fore border; face not concave, finely punctured, with indistinct and slightly oblique striæ on each side; shield transversely rugulose, with two black spots near the fore border, which is tinged with yellow on each side; scutcheon yellow, with a

black tip and a black spot on each side at the base: abdomen yellow along each side: fore-wings blackish along three-fourths of the fore border from the base: hind-wings white. Length of the body 3 lines; of the wings  $6\frac{1}{2}$  lines.

a. Mexico. Presented by E. P. Coffin, Esq.

### 112. Tettigonia albida.

Albida; caput margine antico nigro triguttatum; scutum nigro biguttatum; alæ posticæ sublimpidæ.

Whitish, rather narrow: head short, nearly as broad as the chest, rounded in front, concave along the hind border, finely striated longitudinally, slightly concave on each side, with three black dots on the fore border; face flat, and finely punctured on the disk, with very indistinct striæ on each side: shield transversely rugulose, with a black dot on each side near the fore border: hind-wings almost colourless. Length of the body 3 lines; of the wings 6 lines.

a. Mexico. Presented by E. P. Coffin, Esq.

#### O 113. Tettigonia robusta.

Testacea; caput nigro quadrivittatum et multifasciatum; scutum nigro quadrivittatum et bimaculatum; pectus disco nigro; abdomen supra rufum, subtus maculis piceis bivittatum; alæ anticæ fuscæ, disco rufæ; alæ posticæ subfuscæ.

Testaceous: head and chest rather stout: head short, full as broad as the chest, rounded in front, slightly concave along the hind border: each side with two irregular and interrupted black stripes, which are united near the epistoma, and are more or less connected by black bands; face almost flat on the disk, with the striæ on each side oblique, not very distinct; epistoma with a pitchy keel: shield with four black stripes on the disk, and with a black spot on each side: disk of the breast mostly black: abdomen bright red above, with two rows of pitchy spots beneath: legs pale testaceous: fore-wings brown, with red disks: hind-wings pale brown. Length of the body 2 lines; of the wings 5 lines.

a. ——?

## 114. Tettigonia bella.

Nigra; caput luteo varium; scutellum guttis quatuor luteis unâque albidâ ornatum; abdomen purpureum, subtus apice fulvum; pedes testacei, femoribus anterioribus nigro notatis; alæ anticæ nigro-cupreæ, luteo quadrimaculatæ, apice luridæ; alæ posticæ fuscæ basi cinereæ.

Black, shining, rather stout: head full as broad as the chest, rounded in front, slightly concave behind; crown somewhat impressed on the disk, with a yellow stripe, and with a yellow band along the hind border, and with a curved luteous band on each side of the disk; front and face adorned with numerous luteous spots on each side, and with some larger marks in the middle; three pair of large contiguous luteous spots on the head beneath, one of these on the epistoma: shield with a curved luteous band on each side; scutcheon with a transverse suture in the middle, with two luteous dots on each side, and with a whitish dot near the tip: abdomen dark purple, tawny at the tip beneath: legs testaceous; anterior thighs marked with black: fore-wings bronze-black, adorned with four very large oblong augular luteous spots; tips lurid: hindwings brown, iridescent, pale gray towards the base. Length of the body  $2\frac{3}{4}$  lines; of the wings 6 lines.

a. North India. From Mr. Warwick's collection.

## 115. Tettigonia uniguttata.

Testacea; frons nigro uniguttatus; alæ posticæ limpidæ.

Testaceous: head and chest minutely punctured: head slightly impressed on the crown, rounded in front, concave behind; its length a little less than half its breadth; a black dot on the fore border: legs and fore-wings pale testaceous: hind-wings colourless. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

a. Mexico. Presented by E. P. Coffin, Esq.

#### N 116. Tettigonia melanchloa.

Melauchloa, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 198, 433. France.

#### 0 117. Tettigonia? microcephala.

Tettigonia microcephala, Herr.-Schæff. Faun. 164, 8. Xanthochrea? Amyot, Ann. Soc. Ent. Fr. 2me Série, 235, 505.

Europe.

#### 118. TETTIGONIA INTERRUPTA.

Euacanthus interruptus, Burm. Handb. Ent. ii. 1, 116, 2. Blanch. Hist. Nat. Ins. 193, 2, pl. 15, f. 1. Amyot et Serv. Hist. Nat.

Hém. 575. Herr.-Schæff. Nom. Ent. 67.

Cicada interrupta, Linn. Syst. Nat. 710, 35. Faun. Suec. 889. Fabr. Sp. Ins. ii. 325, 24. Mant. Ins. ii. 270, 30. Ent. Syst. iv. Syst. Rhyn. 76, 67. Gmel. Ed. Syst. Nat. i. 4, 2107, 35. Petiv. Gazoph. pl. 61, f. 10. Fuessli, Ins. Helv. 24, 462. Deg. Ins. iii. 186, 7, pl. 12, f. 6. Geoff. Ins. i. 419, 9. Panz. Faun. Germ. 32, 8. Fall. Act. Holm. 1806, 15, 7. Cic. 28, 5. Zett. Ins. Lapp. 521, 6. Tign. Ins. 159.

Tettigonia interrupta, Germ. Mag. Ent. iv. 72, 26. Amblycephalus interruptus, Curt. Brit. Ent. 572, 2.

Evacanthus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 233, 502.

Var.? Melanderus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 234, 503.

a-e. England.

f—i. France.

j-k. ? Presented by J. G. Children, Esq. l, m. Scotland. Presented by E. Doubleday, Esq.

V0

#### 119. TETTIGONIA ACUMINATA.

Cicada acuminata, Fabr. Ent. Syst. iv. 40. Syst. Rhyn. 68.

Cicada interstincta, Fall. Act. Holm. Cic. 6.

Tettigonia acuminata, Germ. Mag. Ent. iv. 27. Panz. Faun. Ins. Eur. iii. 9.

DEuacanthus acuminatus, Herr.-Schæff. Nom. Ent. 67.

Amblycephalus Germari, Curt. Brit. Ent. 572, 3. Amyot et Serv. Hist. Nat. Hém. 588.

a. England. Presented by F. Walker, Esq. b—q. ?

 $\sqrt{\phantom{a}}$  120. Tettigonia mæsta.

Cicada mœsta, Zett. Ins. Lapp. 7, 5.
Euacanthus mæstus, Herr.-Schæff. Nom. Ent. 67.
Europe.

# 121. TETTIGONIA? MACULIPES.

Amblycephalus maculipes, Curt. Brit. Ent. 572, 4. England.

# 122. Tettigonia? nervosa.

Amblycephalus nervosus, Curt. Brit. Ent. 572, 5. England.

## 123. TETTIGONIA IRRORATA.

Amblycephalus irroratus, Curt. Brit. Ent. 572, 6. England.

## 124. TETTIGONIA FASCIATA.

Picea; caput albido bifasciatum; scutellum albido marginatum, fulvo fasciatum, apice flavum; pectus nigrum; abdomen testaceo bivittatum et subtus fasciatum; pedes testacei; alæ anticæ nigricantes, ad costam luridæ; alæ posticæ luridæ.

Pitchy, shining, almost smooth: head very short-conical in front, nearly as broad as the chest, concave along the hind border; its length above about half its breadth, excepting the eyes; crown with two whitish bands, the front band forked on each side, and sending forth two converging yellow streaks to the front; face convex, conical, ferruginous, with a black disk, and with slight oblique ridges on each side; epistoma lanceolate, pale ferruginous: mouth testaceous: shield with whitish borders; scutcheon with a tawny band near the base, yellow towards the tip: breast black: abdoment testaceous along each side, and with a testaceous band near the tip beneath: legs testaceous: fore-wings blackish, lurid along the fore-border: hind-wings lurid? Length of the body  $2\frac{1}{4}$  lines; of the wings  $4\frac{1}{2}$  lines.

a. United States. Presented by E. Doubleday, Esq.

## 125. Tettigonia quadrata.

Flava; scutellum fulvum, basi nigro bimaculatum, apice flavum; alæ anticæ subfulvæ; alæ posticæ limpidæ.

Yellow, paler beneath: head short, punctured, as broad as the chest, rounded in front; crown equally long across the whole breadth, which, excluding the eyes, is about four times the length; face conical: shield transversely striated, very convex along the fore border, hardly concave behind; scutcheon tawny, punctured, yellow, and minutely striated beyond the transverse section, with a black spot on each side at the base: abdomen wanting: legs yellow; fore-wings slightly tawny; veins tawny: hind-wings colourless: veins brown. Length of the body  $2\frac{1}{2}$ ? lines; of the wings 6 lines.

a. Van Dieman's Land.

#### 126. TETTIGONIA PALLIDA.

Flava; facies piceo bivittata; pectus et abdomen nigra, flavo marginata; pedes nigro varii; alæ anticæ albo-flavæ, apice fuscæ; alæ posticæ albido fuscæ.

Yellow: head short, a little narrower than the chest, almost angular in front, concave along the hind border; front flat, shorter on each side than in the middle, where its length is about half its breadth; eyelets very near the fore border; face truncate-conical, with two pitchy stripes which diverge towards the epistoma, and with short brown slightly oblique bands on each side; epistoma subquadrate, black towards the mouth: shield transversely striated, very convex in front, hardly concave along the hind border: breast black; segments with yellow borders: abdomen black, bordered with yellow; tip yellow beneath: a black spot on each of the anterior thighs; hind-shanks striped with black, beset with black spines and yellow bristles: fore-wings slightly yellow, tinged with white towards the tips, which are pale brown: hind-wings whitish brown. Length of the body  $2\frac{1}{4}$  lines; of the wings 5 lines.

a. Sicily.

### 127. TETTIGONIA? DUBIA.

Nigra, nitens; caput piceum; pedes ferruginei, tarsis posticis piceis; alæ posticæ fuscæ.

Black, shining: head a little narrower than the chest, pitchy, short, slightly rounded in front; eyes very near the fore border of PART III.

the crown, which is much broader than long; face flat, narrow, almost smooth; epistoma lanceolate, divided by a straight suture from the face: chest slightly punctured: legs ferruginous; hind-feet mostly pitchy: hind-wings brown. Length of the body 3 lines; of the wings 6 lines.

a. Philippine Islands. From Mr. Cuming's collection.

## Genus 2. GERMARIA.

Germaria, De Lap. Ann. Soc. Ent. Fr. i. 222. Amyot et Serv. Cicada, p., Fabr. Tettigonia, p., Burm.

## 1. GERMARIA MARMORATA.

Cicada marmorata, Fabr. Syst. Rhyn. 61, 1.
CGermaria cucullata, De Lap. Ann. Soc. Ent. Fr. i. 223, pl. 6, f. 3.
Tettigonia marmorata, Burm. Handb. Ent. ii. 1, 119, 7.

a. Brazil. From Mr. Argent's collection.b, c. Brazil.

#### 2. GERMARIA CRISTATA.

Germaria cristata, Amyot et Serv. Hist. Nat. Hém. 571, 1. © Cicada cristata, Fabr. Syst. Rhyn. 62, 4.

S. America.

#### Genus 3. PROCONIA.

Proconia, St. Farg. et Serv. Enc. Méth. x. 610. Amyot et Serv. Fulgora, p., Linn., Fabr., Gmel.

OCicada, p., Fabr., Deg. OTettigonia, p., Germar.

### 1. PROCONIA OBTUSA.

Proconia obtusa, Amyot et Serv. Hist. Nat. Hém. v. 71, 1. Cicada obtusa, Fabr. Ent. Syst. iv. 33, 25. Syst. Rhyn. 62, 7. Tettigonia obtusa, Germ. Mag. Ent. iv. 62, 7.

S. America.

### 2. Proconia? Nigripennis.

Cicada nigripennis, Fabr. Ent. Syst. iv. 32, 21. Syst. Rhyn. 69, 35.

N. America.

3. PROCONIA UNDATA.

Cicada undata, Fabr. Ent. Syst. iv. 32, 23. Syst. Rhyn. 62, 5. Coqueb. Illustr. i. 32, pl. 8, f. 3.

Tettigonia undata, Germ. Mag. Ent. iv. 61, 6.

Carolina.

## 4. Proconia? ferruginea.

Cicada ferruginea, Fabr. Ent. Syst. iv. 32, 22. Syst. Rhyn. 69, 36. Tettigonia ferruginea, Germ. Mag. Ent. iv. 69, 19. Cape

5. Proconia? vespiformis.

Cicada vespiformis, Fabr. Syst. Rhyn. 68, 33.
S. America.

6. PROCONIA? LURIDA.

Tettigonia lurida, Germ. Mag. Ent. iv. 70, 22. Stoll. Cic. f. 95? Brazil.

7. Proconia? dispar.

OTettigonia dispar, Germ. Mag. Ent. iv. 71, 23.

Brazil.

8. PROCONIA NIGRICANS.

Ferruginea, nigro varia; abdomen nigrum, apice et subtus pallidum; pedes picei; femora ferruginea vel picea, nigro maculata; alæ anticæ piceæ, apice fulvæ; alæ posticæ subcinereæ.

Ferruginous: head short-conical, impressed above on each side by the eye, and with semicircular concentric ridges in front of the eyelets; border black; a truncate-conical black band between the eyelets, and in front a long-conical black band, whose sides are slightly angular; this band joins a short black stripe on the face, which is very convex, and has cross ridges on each side; epistoma keeled: mouth pitchy: chest slightly rugulose, roughly punctured, varied with black; scutcheon luteous towards the tip: abdomen black, luteous beneath and towards the tip: legs pitchy; thighs fer-

ruginous, with black spots: fore-wings pitchy, with tawny tips: hind-wings slightly gray, bordered with pale brown. Length of the body  $4\frac{1}{2}$ —5 lines; of the wings 9—10 lines.

Var.  $\beta$ . Black stripe on the face replaced by an angular spot; disk of the front of the face and of the epistoma black: tip of the scutcheon ferruginous: abdomen ferruginous beneath and at the tip.

Var.  $\gamma$ . Head and chest ferruginous; scutcheon and hind part of the shield partly black: abdomen ferruginous beneath and at the tip: thighs pitchy.

0 Var.  $\delta$ , like var.  $\gamma$ . Head pitchy on each side, slightly ridged in front.

a-d. St. John's Bluff, E. Florida. Presented by E. Donbleday, Esq.

e. North America. f-j. ---?

### 9. PROCONIA CLARIOR.

Nigra; caput luteum, nigro varium; thorax niger, viridi guttatus; abdomen subtus et apice luteum; pedes lutei; alæ anticæ piceæ, apice fulvæ; alæ posticæ subcinereæ, apice fuscæ.

Head luteous, adorned above with black stripes and bands, which enclose six entire and three imperfect quadrilateral compartments; tip of the epistoma black: mouth ferruginous with a black tip: chest black, thickly covered with pale greenish dots, luteous and varied with black in front; scutcheon luteous, marked with black: abdomen black, luteous beneath on each side and at the tip: legs luteous: fore-wings pitchy with tawny tips: hind-wings slightly gray, dark brown along the hind borders and for near half the length from the tips. Length of the body  $4\frac{1}{2}$ —5 lines; of the wings 9—10 lines.

Var.  $\beta$ . Fore-wings with pale spots.

Var.  $\gamma$ . Compartments on the head mostly imperfect: hind-wings brown for two-thirds of the length from the tips.

O Var. S. All the compartments on the head imperfect: three-fourths of the hind-wings brown.

a-c. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

d. Nova Scotia?

e. ——?

## 10. Proconia lucernea?

Ferruginea, nigro maculata; scutellum luteum; abdomen nigrum, subtus piceum, apice ferrugineum; alæ anticæ piceæ, apice fulvæ; alæ posticæ sublimpidæ, fusco marginatæ.

Fulgora lucernea? Linn. Syst. Nat. ii. 704, 6. Fabr. Sp. Ins. ii. 314, 7. Mant. Ins. ii. 313, 7. Ent. Syst. iv. 37. Syst. Rhyn. iii. 7.

Cicada brevirostris? Deg. Ins. iii. 202, 6, pl. 32, f. 6. Fulgora lucernaria? Gmel. Ed. Syst. Nat. i. 4, 2090, 6. Tettigonia lucernaria? Burm. Handb. Ent. ii. 120.

Nearly allied to the two preceding species. Ferruginous: head with two converging black stripes, which unite on the commencement of the slight ridge of the face: shield marked with black; scutcheon dull luteous: abdomen black, pitchy beneath, ferruginous at the tip: legs dark ferruginous: fore-wings pitchy, with tawny tips: hind-wings almost colourless, with brown borders. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

Var. β. Head wholly ferruginous.

a. Brazil. Presented by John Miers, Esq.
b. Brazil. From Mr. Mornay's collection.
c—e. ?

#### 11. Proconia Marginata.

Ferruginea, nigro vittata; scutum albo-viridescens; scutellum luteum, disco nigrum; abdomen nigrum, subtus et apice luteum; pedes lutei, nigro maculati, tarsis nigris; alæ anticæ rufescentes, limpido variæ, basi et ad costam piceæ, apice fulvæ; alæ posticæ fuscæ, basi subcinereæ.

Ferruginous: head with two short, oblique, black stripes on the crown, and in front with two longer, oblique stripes which join the black stripe of the face: rugulose part of the shield dingy whitish green: scutcheon luteous; its disk partly black: abdomen black, luteous beneath on each side and at the tip: legs luteous, with black marks: feet black: fore-wings reddish, here and there almost colourless, pitchy at the base and along part of the fore border, tawny at the tips: hind-wings slightly gray; brown for near

half the length from the tips, which are dark brown. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

### 12. Proconia badia.

Ferruginea, nigro vittata; scutellum piceum, luteo marginatum; abdominis discus piceus; pedes picei; alæ anticæ purpureorufæ, apice subfulvæ; alæ posticæ sublimpidæ.

Ferruginous: head with a very short and slightly oblique black stripe on each side of the crown, and in front with two long oblique stripes, which join the short black stripe on the face: shield depressed on each side in front; scutcheon pitchy, luteous on each side and towards the tip: disk of the abdomen pitchy above and beneath: feet pitchy: fore-wings dark purplish red; tips transparent with a slight tawny tinge: hind-wings almost colourless. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. ——?

## 13. Proconia scutellata.

Testacea, nigro vittata; scutum anticè luteum; abdomen nigrum, lateribus et apice subtus luteum; alæ anticæ rufo-piceæ, apice subfulvæ; alæ posticæ limpidæ, fusco marginatæ.

Testaceous: front of the head with two very slender, oblique black stripes, which are united towards the face: shield slightly marked with black, mostly luteous in front: abdomen black, lurid beneath on each side and towards the tip: legs luteous; feet pitchy towards the tips: fore-wings reddish pitchy, transparent, with a slight tawny tinge towards the tips: hind-wings colourless with narrow brown borders. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. —— ?

#### U 14. Proconia terminalis.

Lutea; caput nigro fasciatum; scutum abdominisque dorsum nigra; alæ anticæ rufo-piceæ, albido maculatæ; alæ posticæ fuscæ, limpido unimaculatæ.

Luteous: head with a short black band in front of the eyelets; keel of the epistoma and mouth ferruginous: shield black, with

olive wrinkles: abdomen black above excepting the tip: fore-wings reddish pitchy, with dingy whitish spots, which are most prevalent towards the base: hind-wings dark brown, with a large colourless spot in the disk. Length of the body 6 lines; of the wings 11—12 lines.

a, b. ----?

## 15. PROCONIA MAGNA.

Lutea; caput nigro fasciatum et vittatum; thorax niger luteo maculatus; abdominis dorsum nigro-aneum; pedes rufescentes, femoribus luteis; alæ anticæ rufo-piceæ, luteo guttatæ, apice fulvæ; alæ posticæ fuscæ, basi limpidæ.

Luteous: head above with slender black bands and stripes, which form imperfect quadrilateral compartments; two pitchy stripes on the face, united in front and behind, and inclosing an oval compartment, and joining a triangular black spot which rests on the epistoma; the latter has a black stripe which widens in front and occupies the whole of the tip: mouth ferruginous: chest black: shield with some large luteous spots in front; angles of the scutcheon luteous; its disk partly luteous: abdomen above bronze-black: legs reddish; thighs luteous; feet pitchy towards the tips: forewings reddish pitchy, with a few luteous dots; middle part covered with whitish powder; tips tawny: hind-wings dark brown; their disks colourless towards the base, Length of the body  $6\frac{1}{2}$  lines; of the wings 13 lines.

a. Brazil. From Mr. Shuckard's collection.

### 16. PROCONIA TENEBROSA.

Ferruginea; caput nigro vittatum; thorax niger, ferrugineo varius; ab lominis discus niger; pedes, tibiis, tarsisque piceis; alæ anticæ piceæ, albo plagiatæ, apice luridæ; alæ posticæ fuscæ, basi cinereæ.

Ferruginous: crown with an undulating black band; front with four oblique black stripes which converge towards the black stripe on the face: chest black; shield ferruginous in front, its wrinkles olive on each side; angles of the scutcheon ferruginous: disk of the abdomen black above: shanks and feet mostly pitchy: fore-wings pitchy; flaps at the base of the hind border bronze-

black; tips lurid; a white, oblong, raised spot along the middle of the fore border: hind-wings brown, pale gray towards the base. Length of the body 5 lines; of the wings 10 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

#### 7. PROCONIA PLAGIATA.

Lutea, nigro vittata et fasciata; abdominis discus niger; alæ anticæ piceæ, albo plagiatæ, apice luridæ; alæ posticæ fuscæ, basi sublimpidæ.

Luteous: head above with two short black stripes, which are united in front and behind, and enclose an oval compartment which emits four black rays towards the hind border; a curved black band on the fore border joins the three black stripes of the face, which is marked with black towards the epistoma: mouth ferruginous: shield slightly marked with black, pale on each side; disk of the scutcheon adorned with black stripes and bands, which form eight compartments: disk of the back of the abdomen black: fore-wings pitchy, lurid at the tips, adorned on the middle of the fore border with a large, oblong, convex, white spot: hind-wings brown, almost colourless towards the base. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. ——?

## 18. Proconia parallela.

Nigra, angusta; caput flavo bimaculatum; abdomen atrum, lateribus ventreque flavum; pedes flavi; alæ anticæ fuscæ, ad costam piceæ, apice albidæ; alæ posticæ subcinereæ, fusco marginatæ.

Black: body linear, rather long: head more produced in front than in any of the preceding described species, depressed on each side between the eyes, pale yellow on each side along the hind border: mouth pale yellow: scutcheon ferruginous on each side: abdomen deep black, pale yellow along each side and beneath: legs pale yellow: fore-wings brown, pitchy along the fore border, whitish at the tips: hind-wings slightly gray, bordered with brown. Length of the body 6 lines; of the wings 12 lines.

a. Venezuela. From Mr. Dyson's collection.

#### Ø 19. Proconia atra.

Picea, subtus flava (mas) aut nigra (fem.); caput trigonum; scutum testaceo fasciatum; abdomen lateribus flavo maculatum, subtus nigro flavoque fasciatum; pedes fulvi, femoribus flavis; alæ anticæ piceæ, apice luridæ; alæ posticæ cinereæ, fusco marginatæ.

Male. Pitchy, bright yellow beneath: head almost triangular, more produced than that of P. parallela; slightly depressed on each side between the eyes, and in the middle, which has a longitudinal furrow; disk of the face pitchy towards the epistoma: mouth pitchy: shield roughly punctured, with four larger and deeper depressions in front, slightly testaceous across the disk; scutcheon almost smooth, with a transverse furrow on the disk: abdomen black, with a row of bright yellow spots along each side: underside with a black band on the fore border of each segment; valves at the tip yellow; tentacula ferruginous with black tips: legs tawny; tips of the shanks and of the feet pitchy; thighs yellow with pitchy tips: fore-wings pitchy, lurid towards the tips: hind-wings gray, with brown borders.

Fem. Broader and less linear than the male, black beneath excepting a stripe along the fore border of the head and the hind borders of the abdominal segments: wings more brown at the tips.

Length of the body  $7\frac{1}{2}$  lines; of the wings 14 lines.

a. Honduras. From Mr. Dyson's collection.

# 20. Proconia contraria.

Nigra; caput trigonum, subtus flavo fasciatum; pectus piceum, flavo bivittatum; abdomen atrum, lateribus ventreque flavum nigro fasciatum; pedes picei; alæ anticæ piceæ, albo plagiatæ, apice luridæ; alæ posticæ fusco-cinereæ.

Fem. Black, in structure like P. atra: head above with a longitudinal furrow, beneath with a broad bright yellow band, which joins a yellow stripe along each side of the breast: shield rugulose and roughly punctured, with some large excavations in front: breast pitchy: abdomen deep black, bright yellow along each side, excepting the fore borders of the segments; underside bright yellow, with a black band on the fore border of each segment: legs pitchy: forewings pitchy, adorned in the middle of the fore border with a large,

oblong, convex, white spot; tips lurid: hind-wings dark gray, tinged with brown, dark brown along the borders. Length of the body 8 lines; of the wings 14 lines.

a. Honduras. From Mr. Dyson's collection.

## 21. PROCONIA SPECULIFERA.

Ferruginea, luteo vittata; caput subtus apice rufum; pectus flavo bivittatum; abdomen rufescens, subtus flavum; femora fulva; alæ anticæ luteæ, apice et ad costam fuscæ, vitta rufa luteo guttata ornatæ; alæ posticæ sublimpidæ, apice fuscæ.

Ferruginous, slender: head short, adorned above with a luteous stripe, pitchy in front; face pale yellow on each side, flat, black, and roughly shagreened on the disk, red, smooth, and shining towards the epistoma, which is also red: chest with an interrupted luteous stripe which forms two spots on the shield, and three on the scutcheon; shield with a yellow dot on each side: breast with a black spot on each side of the disk, and with a broad, pale yellow stripe along each side: abdomen reddish, with an indistinct yellow stripe, ferruginous at the tip, yellow beneath: hips and thighs tawny: fore-wings luteous, brown and partly suffused with white along the fore borders and towards the tips, adorned in the brown part near the fore border, with a red stripe, beneath which there are some luteous dots: hind-wings almost colourless, brown at the tips and along part of the hind border. Length of the body  $6\frac{1}{2}$  lines; of the wings 12 lines.

a. ——?

# Genus 4. AULACIZES.

Aulacizes, Amyot et Serv. Hist. Nat. Hém. 571, 468. Cicada, p., Fabr. Tettigonia, p. Germar.

### 1. Aulacizes 4-punctata.

Aulacizes 4-punctata, Amyot et Serv: Hist. Nat. Hém. 571, 1, pl. 11, f. 9.

Tettigonia 4-punctata, Germ. Mag. Ent. iv. 59, 4.

Brazil.

### 2. Aulacizes? intersecta.

Tettigonia intersecta, Germ. Mag. Ent. iv. 60, 4. Brazil.

## 3. Aulacizes dives.

Testacea; thorax piceus; pectoris discus niger; abdomen nigrum, lateribus flavo maculatum, subtus flavum nigro maculatum; pedes picei, tarsis nigris, femoribus intermediis testaceis; alæ anticæ rufo-piceæ; alæ posticæ fuscæ.

Body and wings covered with a blue bloom: head testaceous, short-conical, slightly furrowed, black along the hind border; face flat on the disk, with transverse ridges along each side, black towards the epistoma, which, and the mouth are also black: chest pitchy: shield rugose, roughly punctured, with a broad testaceous band in front; scutcheon finely striated across towards the tip: breast testaceous, black on the disk and with a short black band on each side: abdomen black, with a row of yellow spots along each side; under side yellow, with a row of black triangular spots resting on the fore borders of the segments, and extending to the hind borders and to each side: legs pitchy; feet black; middle-thighs dull testaceous: fore-wings reddish pitchy; veins minutely nodose: hind-wings dark brown. Length of the body 8 lines; of the wings 16 lines.

a. ——?

# 4. AULACIZES LINEARIS.

Picea, linearis; caput et pectus rufa, hujus discus niger; scutum rufo bimaculatum; scutellum apice fulvum; abdomen nigroæneum, subtus rufum albo pubescens; pedes rufi; tarsis nigris; alæ anticæ rufo-piceæ apice fuscæ; alæ posticæ cupreofuscæ.

Body and wings slightly tinged with blue: body linear, mostly covered beneath with white down: head dark red, short, almost semicircular, black along the hind border, deeply furrowed above; face concave on the disk, convex, and with oblique ridges on each side: mouth pitchy: chest pitchy; shield rugose, with two oblique red marks by the fore border, where it is deeply impressed on each side; tip of the scutcheon tawny: breast red; its disk mostly black: abdomen bronze-black, red beneath, where the white down encloses

tive rows of irregular spots: legs red; shanks darker than the thighs; feet black: fore-wings reddish pitchy, with brown tips: hind-wings dark brown, with a coppery tinge. Length of the body 7 lines; of the wings 14 lines.

a. British Guiana. Presented by Sir R. Schomburgk.

### D5. Aulacizes atomaria.

Nigra; caput ferrugineum, flavo varium; thorax flavo varius; pectus et abdomen flava, hoc apice piceum; pedes fulvi; alæ anticæ piceæ, flavo confertim guttatæ; alæ posticæ fuscæ.

Head ferruginous, short-conical, blackish, and impressed on each side by the hind border, deeply furrowed in front; hind border yellow, with a row of brown spots; face concave on the disk, convex, yellow, and with oblique ridges on each side; epistoma luteous: chest black: shield rugose, adorned with two yellow bands, the first interrupted; scutcheon adorned with yellow marks: breast mostly yellow: abdomen yellow, pitchy towards the tip: legs tawny; fore-wings pitchy, thickly covered with yellow convex dots: hindwings brown. Length of the body  $7\frac{1}{2}$  lines; of the wings 15 lines.

a. Parà. From Mr. Stevens' collection.

## 0 6. Aulacizes conspersa.

Flava, nigro fasciata et vittata; pectus nigro quadrimaculatum; abdominis dorsum nigrum; alæ anticæ ferrugineæ, flavo confertim maculatæ, apice fulvæ; alæ posticæ sublimpidæ, fusco marginatæ.

Yellow: head truncate-conical, excavated in front, with a short black band in the disk, and with two oblique black stripes, which are connected by a black band along the hind border; face slightly concave and striated longitudinally on the disk, convex, and with transverse ridges on each side, adorned towards the fore border with a black band, which is continued on each side towards the eye: shield adorned with two black bands, the first slender, forked on each side, connected by a black stripe with the second, which is broader, and includes two yellow spots and occupies the hind border; scutcheon with a black band, black at the tip: breast with two black spots on each side: abdomen black above, excepting the tip: fore-wings ferruginous, adorned with numerous yellow spots, of various size; a

very large spot near each tip, which is tawny: hind-wings almost colourless, brown towards the tips and along the hind borders. Length of the body  $5-5\frac{1}{2}$  lines; of the wings 11 lines.

a-b. Brazil.

## 7. Aulacizes maculata.

Flava, nigro vittata et fasciata; scutellum nigrum, flavo quadrimaculatum; pectoris discus niger; abdomen nigrum, lateribus flavo maculatum, subtus flavo fasciatum, apice flavum; alæ anticæ ferrugineo-rufæ, apice luridæ; alæ posticæ fuscæ, basi sublimpidæ.

Yellow: head truncate-conical, excavated in front, with a short twice-semicircular black band on the disk, and with two oblique black stripes, which are united on the hind border; face slightly concave, and with an angular black mark in the disk, convex, and with indistinct oblique ridges on each side, black towards the epistoma, which has a black tip: mouth pitchy: shield rugose, with two black bands, the first zigzag and irregular, united by two short black stripes with the second, which is broader and occupies the hind border; scutcheon black, with four yellow spots, three along the fore border and one at the tip: breast black on the disk, and with an irregular black ringlet on each side: abdomen black, with a bright yellow tip; a row of yellow spots along each side; underside with a yellow band along the hind border of each segment: forewings ferruginous red, with lurid tips: hind-wings brown, almost colourless towards the base. Length of the body 6 lines; of the wings 11 lines.

a. Brazil. From Mr. Mornay's collection.

### 8. Aulacizes terminalis.

Flava, nigro fasciata et vittata; scutellum nigrum, flavo quadrimaculatum; pectoris discus niger; abdomen nigrum, lateribus apiceque flavum; alæ anticæ ferrugineæ, fulvo maculatæ, apice luridæ; alæ posticæ fuscæ, basi sublimpidæ.

Yellow: head truncate-conical, slightly excavated in front; a short black stripe on the disk is forked in front, and forms two black stripes along the face; two black oblique stripes over the eyelets are united by a short band on the hind border; face slightly concave,

3 A

longitudinally striated, and traversed by an angular black band on the disk, convex, and with transverse ridges on each side, with a broad black band along the fore border; epistoma at the tip and mouth pitchy: shield with two black bands; the first undulating, forked on each side, connected by three slender stripes with the second, which is broad, and occupies the hind border; scutcheon black, with four yellow spots, three along the fore border and one at the tip: breast black on the disk, and with an irregular black ringlet on each side: abdomen black, with a bright yellow tip; a row of yellow spots along each side; underside yellow, with a black disk; fore-wings ferruginous, adorned with tawny spots of various size and shape; tips lurid: hind-wings brown, almost colourless towards the base. Length of the body  $5\frac{1}{2}$  lines; of the wings  $10\frac{1}{2}$  lines.

a. Bahia. Presented by M. Reiche.

### 9. AULACIZES VIRIDIVITTA.

Ferruginea; caput testaceum; thorax testaceo maculatus; scutellum apice et pectus lateribus flava; abdomen piceum, maculis fulvis et viridibus trivittatum, subtus fulvum nigro fasciatum; alæ anticæ flavo guttatæ, albo farinosæ, apice fuscæ; alæ posticæ sublimpidæ, fusco marginatæ.

Ferruginous: head testaceous, conical, depressed above, with the exception of the hind border, slightly excavated on the disk towards the fore border; face flat, hardly concave on the disk, with transverse ridges on each side: mouth ferruginous: shield transversely striated, covered with testaceous dots, wholly testaceous in front; tip of the scutcheon pale yellow: breast yellow on each side: abdomen pitchy, with a row of connected green spots on the back, and with a row of tawny spots along each side; underside tawny, with a triangular black band on the fore border of each segment: fore-wings powdered with white, brown towards the tips, pitchy here and there, covered with yellow dots, which in the middle of the fore-border are mostly confluent, and form a distinct triangular spot: hind-wings almost colourless, dark brown towards the tips and along the hind borders. Length of the body 7 lines; of the wings 12 lines.

a. Parà. From Mr. Stevens' collection.

### 10. Aulacizes canaliculata?

Cicada canaliculata? Fabr. Syst. Rhyn. 63, 8.

Ferruginea; pectoris latera pallida; abdominis dorsum piceum, maculis ferrugineis et viridibus trivittatum; alæ posticæ sublimpidæ, fusco marginatæ.

Nearly allied to A. viridivitta, rather stouter. Pale ferruginous: head conical, depressed above, with the exception of the hind border, excavated on the disk by the fore border; face finely striated, and slightly excavated on the disk, convex, with transverse ridges on each side: sides of the breast pale: abdomen pitchy above, with a row of connected pale green spots on the back, and with a row of pale ferruginous spots on each side: hind-wings almost colourless, brown towards the tips and along the hind borders. Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

#### a. — ?

### 11. AULACIZES BASALIS.

Ferruginea; caput nigro fasciatum, subtus apice nigrum; scutum nigro fasciatum; scutellum nigro bimaculatum; pectoris discus niger; abdomen nigrum, subtus ferrugineo marginatum; alæ anticæ virides, nigro fasciatæ, apice fuscæ; alæ posticæ fuscæ.

Ferruginous: head conical, excavated on the disk towards the fore border, with a slight black band between the eyes; face convex, with slight oblique ridges on each side, with a finely striated very small depression on the disk, black towards the epistoma, which is also black: mouth yellow, with a pitchy tip: shield testaceous towards the hind border, where there is a black band; scutcheon with a black spot on each side of the base: disk of the breast black: abdomen black above; underside with a black disk: fore-wings pale green, with a black band towards the tips, which are brown: hindwings brown. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. Venezuela. From Mr. Dyson's collection.

# 12. Aulacizes rufiventris.

Nigra; caput fulvo guttatum, facie flavum aut rufum; scutum fulvo guttatum; scutellum fulvo unimaculatum; pectoris latera flava, nigro guttata; abdomen rufum, subtus nigrum flavo marginatum; pedes fulvi, nigro maculati; alæ anticæ ferrugineæ, flavo guttatæ; alæ posticæ fuscæ.

Black: head short-conical, with a longitudinal furrow, which is widened in front, adorned with tawny dots; face pale yellow, convex, with slight oblique tawny ridges on each side, flat on the disk, which has a black dot on the middle of each side, black, and with a luteous curved mark on each side towards the epistoma, which is also black, and has a large yellow spot on each side: mouth pitchy: shield with numerous tawny dots; scutcheon with a tawny spot: sides of the breast yellow, with black dots: abdomen bright red, yellow beneath, with a black disk: legs tawny, spotted with black: fore-wings ferruginous, with numerous yellow dots, darker, with a short row of yellow spots along the fore border, brown along the hind border for a short space from the tips: hind-wings brown, paler at the base. Length of the body 4 lines; of the wings 9 lines.

Var.  $\beta$ . Face with two black spots on each side: scutcheon with a red spot.

Var. y. Face red, with two small black spots on each side.

- a, b. St. John's Bluff, E. Florida. Presented by the Entomological Club.
- c, d. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

## 013. Aulacizes latifascia.

Brevis; caput flavum; scutum album, piceo bifasciatum; scutellum ferrugineum; abdomen rufum, subtus piceum; pedes flavi; alæ rufo-fuscæ; alæ anticæ latæ, albo bifasciatæ.

Body short: head yellow, truncate-conical, with an oblique pitchy stripe on each side between the feeler and the hind border; a black dot on the fore border; face very slightly depressed on the disk, convex, with transverse ridges on each side; epistoma pitchy: mouth ferruginous: shield white, with a slender slightly curved pitchy band near the fore border, and with a broad pitchy band along the hind border: scutcheon ferruginous: breast with a whitish

covering on each side: abdomen bright red; underside pitchy, red at the base: legs yellow: wings reddish brown: fore-wings broad, adorned with two very broad white bands. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

## Genus 5. PROPETES.

Caput conicum, non acuminatum, supra foveolatum: abdomen basi compressum: tibiæ anticæ dilatatæ.

Head large, conical, with a longitudinal furrow, not pointed: abdomen compressed towards the base: fore-shanks widening towards the tips.

### 1. Propetes compressa.

Nigra; caput flavo bimaculatum; scutum antice flavo trimaculatum; scutellum luteum, piceo trivittatum; pectus fuscum; abdomen flavo et albido fasciatum; pedes testaceo-flavi; alæ fusco marginatæ; alæ anticæ subfulvæ, ad costam albido unimaculatæ; alæ posticæ limpidæ.

Black: head large, conical, broader than the chest, almost truncate in front, with a yellow spot on each side of the hind border, where it is impressed on each side, finely striated on the disk, with curved ridges along the border; underside brown on each side towards the eye: face triangular, very slightly concave, very minutely striated, shining, as if polished, convex, and with very slight ridges on each side: shield transversely rugose, with three yellow spots along the fore border; scutcheon pale luteous, with three pitchy stripes in front of the transverse furrow: breast brown, with a short broad yellow stripe, which rests on a slender yellow band: abdomen compressed, and adorned with two yellow arched bands towards the base; hind borders of some of the other segments whitish; underside with a pale yellow spot at the base: posterior-thighs testaceous beneath; fore-shanks widening from the base to the tips; middleshanks testaceous, with black tips; hind-shanks testaceous at the base: fore-wings narrow, transparent, slightly tawny, mostly brown along the borders, adorned with an oblong convex white spot along the middle of the fore border: hind-wings colourless, bordered with brown. Length of the body 8 lines; of the wings 14 lines.

a, b. Parà. From Mr. Stevens' collection.

### Genus 6. DIESTOSTEMMA.

Diestostemma, Amyot et Serv. Hist. Nat. Hém. 572, 469. Cicada, p., Fabr.

#### 9. DIESTOSTEMMA ALBIPENNIS.

Diestostemma albipennis, Amyot et Serv. Hist. Nat. Hém. 572, 1. QCicada albipennis, Fabr. Syst. Rhyn. 62, 3.

a. Parà. Presented by Gordon Graham, Esq.
b. Parà. Presented by Reginald Graham, Esq.
c. Brazil. Presented by the Entomological Club.
d, e. Brazil. From Mr. Mornay's collection.
f-h. ——?

### 2. DIESTOSTEMMA TERMINALIS.

Lutea; caput nigro triguttatum, facie bimaculatum; scutum nigro unimaculatum piceo fasciatum; scutellum et abdomen nigra, hoc lateribus apiceque luteum; pedes fulvi, tarsis piceis; alæ anticæ testaceæ, apice fusco marginatæ; alæ posticæ subcinereæ, fusco marginatæ.

Luteous: head conical, rather broad, with a very broad and shallow longitudinal furrow, adorned with three black dots, one by each eyelet, and one on the fore border; face slightly concave, with a black spot on each side towards the epistoma: mouth pitchy shield flat, with a black spot near the fore border, and a pitchy band along the hind border: scutcheon black: abdomen black, luteous along each side and at the tip: legs tawny; feet pitchy: fore-wings testaceous, brownish on the borders towards the tips: hind-wings slightly gray, pale brown at the base and along the hind borders and at the tips. Length of the body 6 lines; of the wings 14 lines.

a. —— ?

## Genus 7. CICCUS.

Ciccus, Latr. Règ. Anim. 2 ed. ii. 221. Amyot et Serv. Hist. Nat. Hém. 572, 470.

Cicada, p., Fabr., G. R. Gray.

O Tettigonia, p., Germ., Burm., Blanch.

#### CICCUS ADSPERSUS.

Cicada adspersa, Fabr. Syst. Rhyn. 61, 2. © Tettigonia adspersa, Burm. Handb. Ent. ii. 1, 119, 6. Blanch. Hist. Nat. Ins. iii. 192, 18. Hém. pl. 14, f. 6.

a. Brazil. Presented by J. G. Children, Esq.
b. Brazil. Presented by John Miers, Esq.
c. Brazil. From Mr. Mornay's collection.

## 2. Ciccus fulvofasciatus.

- Cicada fulvofasciata, G. R. Gray, Griff. Anim. Kingd. ii. pl. 109, f. 4.
  - a. Brazil. Presented by John Miers, Esq.

b. Bahia. Presented by M. Reiche.

c—f. Brazil. From Mr. Mornay's collection. g, h. Brazil.

### 3. CICCUS PERVIRGATUS.

Ciccus pervirgatus, Amyot et Serv. Hist. Nat. Hém. 573, 2, pl. 11, f. 1.

## 4. Ciccus vitripennis.

Tettigonia vitripennis, Germ. Mag. Ent. iv. 61, 5. Brazil.

#### O5. CICCUS? ERYTHROCEPHALUS.

Tettigonia erythrocephala, Germ. Mag. Ent. iv. 59, 2. Burm. Handb. Ent. ii. 1, 119, 8.

Brazil.

## 6. Ciccus obliquus.

Niger; scutum fulvo fasciatum; pectus piceum; abdomen basi fulvum; alæ anticæ piceæ, fulvo fasciatæ et basi vittatæ; alæ posticæ cupreo-fuscæ, basi fulvæ.

Black: head conical, with a slight longitudinal furrow; a striated stripe on the face, which has strongly marked cross ridges on each side: feelers more than half the length of the body: shield thickly punctured, with a tawny band along the hind border: breast pitchy: abdomen tawny at the base: fore-wings pitchy, with a very short tawny stripe at the base, and an oblique tawny band beyond the middle: hind-wings coppery brown, tawny at the base. Length of the body 5½ lines; of the wings 13 lines.

a. Brazil. Presented by John Miers, Esq.b. Brazil. From Mr. Shuckard's collection.

### 7. CICCUS TESTACEUS.

Testaceus; caput nigro fasciatum et vittatum; scutellum nigro biguttatum; pectoris latera nigro trifusciata; abdominis dorsum luteum, lateribus nigro maculatum, apice piceo fasciatum et vittatum; pedes albidi, tibiis apice nigris, tarsis fulvis; alæ anticæ fulvæ, flavo confertim guttatæ; alæ posticæ limpidæ.

Testaceous: head long-conical, with a broad and shallow longitudinal furrow; two V-shaped black marks extend along half the length from the hind border; a short black band on the furrow emits a short middle stripe towards the hind border, and a ferruginous stripe from each end to the hind border, which has two pitchy dots; face slightly concave on the disk, with indistinct, oblique ridges on each side, adorned with two irregular black bands; epistoma with a ferruginous stripe: shield punctured and rugose, with two pitchy much curved marks which are connected by a band; a black dot on each side of the scutcheon, which is ferruginous towards the tip: breast whitish, with three oblique black bands on each side: abdomen luteous above, with a row of black dots along each side, and near the tip with a pitchy stripe on each side, and two pitchy bands: legs whitish; thighs with tawny tips; shanks with black tips; middle-shanks with pitchy tips; hind shanks pitchy towards the base; feet tawny with black tips: fore-wings tawny, thickly covered, excepting the tips, with yellow dots: hind-wings almost colourless. Length of the body 6 lines; of the wings 10 lines.

## 8. CICCUS MACULATUS.

Ferrugineus; caput testaceo maculatum, antice nigro marginatum; scutum et pectus testacea; scutellum testaceo trimaculatum; abdomen rufum, subtus flavum apice nigrum; pedes albidi, tibiis apice nigris, femoribus tibiisque anticis tarsisque fulvis; alæ anticæ piceæ, basi viridescentes, flavo guttatæ apice fulvæ; alæ posticæ sublimpidæ, fusco marginatæ.

Ferruginous: head conical, slightly curved upward, with a slight, narrow, longitudinal furrow, adorned with testaceous spots which are confluent towards the hind border; fore border black; face concave on the disk; sides pitchy, tawny in front of the feelers, with indistinct oblique ridges: shield dull testaceous with darker punctures; scutcheon with three large, irregular, pale testaceous spots: breast pale testaceous: abdomen red, yellow beneath, with a black tip: legs whitish; tips of the shanks black; fore-thighs and fore-shanks tawny; feet tawny with black tips: fore-wings pitchy, greenish with yellow dots towards the base, tawny at the tips and along part of the hind borders: hind-wings almost colourless, brown at the tips and along the hind borders. Length of the body 5 lines; of the wings 10 lines.

Var.  $\beta$ . Head testaceous, with a ferruginous stripe: breast white: abdomen yellow beneath at the tip: fore-wings with whitish tips.

O Var.  $\gamma$ . Back of the abdomen with a black tip. a-e. Brazil.

# 9. Ciccus diminutus.

Ferrugineus; facies, scutellum et pectoris discus picea; abdominis dorsum piceum basi rufescens; pedes tibiis apice tarsisque nigris; alæ anticæ piceæ, basi viridi-fulvæ, apice luridæ; alæ posticæ fuscæ.

Ferruginous: head conical, with a longitudinal furrow, widening towards the tip, which is curved upward; face pitchy, ferruginous towards the front, striated and concave on the disk, with oblique ridges on each side: shield roughly punctured; scutcheon pitchy with a ferruginous tip: disk of the breast pitchy: abdomen pitchy above, reddish at the base: feet and tips of the shanks black: fore-wings pitchy, dull greenish tawny towards the base, with lurid

tips: hind-wings brown, pale towards the base. Length of the body 5 lines; of the wings 10 lines.

a. Brazil.

#### 0 10. Ciccus dorsivitta.

Niger, subtus flavus; abdomen flavo univittatum; pedes flavi, tibiis anticis tarsisque apice nigris, tibiis posterioribus ferrugineis; alæ anticæ fuscæ; alæ posticæ sublimpidæ, apice fuscæ.

Black, bright yellow beneath: head long-conical, hardly curved upward, with a deep longitudinal furrow; face slightly concave on the disk, with distinct, oblique, slightly curved ridges on each side: tip of the mouth pitchy: shield punctured, slightly rugose: back of the abdomen with a yellow stripe, which tapers from the base to the tip: legs yellow; fore-shanks with black tips; posterior shanks ferruginous above with pitchy tips; feet with black tips: fore-wings brown, darkest at the base and at the tips: hind-wings almost colourless with brown tips. Length of the body 6 lines; of the wings 12 lines.

a. Parà. From Mr. Stevens' collection.

## O 11. CICCUS RUFIFACIES.

Niger; caput subtus rufum; scutum rufo bivittatum; metathorax et pectus testacca; abdomen subtus viridi-albo marginatum, maculis albidis bivittatum; pedes femoribus basi testaceis, tibiis posterioribus albido fasciatis; alæ anticæ fuscæ flavo bifasciatæ; alæ posticæ subcinereæ, fusco marginatæ.

Black: head very long-conical, not curved upward, with a deep, longitudinal furrow, which widens towards the fore border; face bright red, flat on the disk, with slight, oblique ridges on each side, black towards the front, and with two arched black bands; epistoma bright red, black towards the mouth, which is greenish white: shield punctured, with a broad red stripe on each side: hind-chest and breast testaceous, the latter pitchy on each side; underside of the abdomen greenish white at the base, along each side and at the tip, and with two rows of whitish spots along the disk: thighs testaceous at the base; a broad whitish band on each of the posterior shanks: fore-wings brown, with two broad, yellow, oblique bands: hind-

wings slightly gray, brown at the tips and along the hind borders. Length of the body  $5\frac{1}{2}$  lines; of the wings 10 lines.

a. Brazil. From Mr. Shuckard's collection.

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#### 12. Ciccus intermedius.

Niger, subtus albido varius; facies rufa, nigro bivittata; scutum rufo bivittatum; pedes albido cincti; alæ anticæ piceæ; alæ posticæ sublimpidæ, fusco marginatæ.

Black: head very long-conical, not curved upward, with a deep longitudinal furrow; face bright red, flat and finely striated on the disk, with slight, oblique ridges on each side, black towards the front, and with two arched, black bands: mouth whitish: shield punctured, with a broad red stripe on each side: hind-chest testaceous: breast whitish, partly pitchy: abdomen deep black; underside whitish along each side and at the tip: thighs and hind-feet whitish at the base; a broad white band on each of the posterior shanks: forewings pitchy: hind-wings almost colourless, brown at the tips and along the hind borders. Length of the body 5 lines; of the wings 10 lines.

a. Brazil. Presented by John Miers, Esq.

O13. Ciccus cinctipes.

Niger; pectus albo bivittatum; abdomen subtus maculis albis bivittatum, apice album; pedes femoribus basi testaceis, tibiis posterioribus albo cinctis; alæ posticæ fuscæ.

Black: head very long-conical, not curved upward, with a deep longitudinal furrow; face flat and finely striated on the disk, slightly concave towards the front, with slight, oblique ridges on each side: mouth whitish: feelers white: shield punctured, slightly impressed in front: breast with a white stripe on each side: underside of the abdomen with a white tip, and a row of white spots along each side: thighs testaceous at the base; a white band on each middle shank, and a whitish band on each hind shank: fore-wings black: hind-wings brown. Length of the body  $5\frac{1}{2}$  lines; of the wings 9 lines.

a. Brazil. From Mr. Mornay's collection.

### 14. Ciccus ignifer.

Niger; facies rufa; abdomen apice miniatum; pedes picei, albido varii, femoribus basi testaceis; alæ anticæ rufæ, apice fuscæ; alæ posticæ fuscæ.

Black: head very long-conical, flat, not curved upward, with a narrow longitudinal furrow; face finely shagreened, red, and with distinct, oblique ridges on each side, keeled, and with a slight red mark towards the front; epistoma with a reddish border: mouth testaceous: shield finely transversely striated: hind-chest pitchy: abdomen very bright red-lead colour towards the tip: legs pitchy; thighs testaceous at the base; anterior shanks, anterior feet, and tips of anterior thighs, whitish: fore-wings red, with dark brown tips: hind-wings dark brown. Length of the body 5 lines; of the wings 9 lines.

a. Columbia. From M. Jurgens' collection.

## Genus 8. RHAPHIRHINUS.

Rhaphirhinus, De Laporte, Ann. Soc. Ent. Fr. 1. Amyot et Serv. Hist. Nat. Hém. 573.

Fulgora, p., Linn., Fabr., Gmel., Oliv., Tign., Donov.

Cicada, p., Deg.

Tettigonia, p., Burm., Blanch.

#### 1. Rhaphirhinus fasciatus.

<sup>©</sup>Fulgora fasciata, Fabr. Mant. Ins. ii. 261, 12. Ent. Syst. iv. 4, 12. Syst. Rhyn. 4, 12. Stoll, Cic. 35, pl. 6, f. 29. Gmel. Ed. Syst. Nat. i. 4, 2091, 14.

CRhaphirhinus obliquatus, De Lap. Ann. Soc. Ent. Fr. i. 415, 3.

Tettigonia fasciata, Burm. Handb. Ent. ii. 120, 9.

#### O VAR.?

Stramineus, nigro vittatus; scutellum piceum; abdomen supra testaceum, luteo fasciatum, apice ferrugineum; alæ anticæ fuscæ, apice luridæ, flavo quadrivittatæ; alæ posticæ sublimpidæ, apice fuscæ.

Straw colour, slender: head conical, hardly curved upward, with a broad black stripe, and a narrow longitudinal furrow, termi-

nating in a long, slender, filiform horn, which is much curved upward, and has a pitchy stripe on each side; face flat on the disk, with distinct, oblique ridges on each side, adorned with two arched, ferruginous bands; epistoma ferruginous towards the mouth: shield yellow, with black punctures, and with a pitchy stripe, straw colour and with three stripes in front; middle stripe broad, black: side stripes slender, pitchy; scutcheon pitchy; hind chest testaceous: breast with a ferruginous stripe on each side: abdomen testaceous above, with a luteous band on the hind border of each segment, ferruginous at the tip: tips of the feet pitchy; fore-wings brown, with lurid tips, adorned with four yellow bands; first at the base; second oblique; third upright, widening from the fore border to the hind border: fourth nearly upright, widest towards the fore border: hind-wings almost colourless, with pale brown tips. Length of the body 8 lines; of the wings 11 lines.

a. Parà. From Mr. Stevens' collection.

### 2. Rhaphirhinus phosphoreus.

OFulgora phosphorea, Linn. Syst. Nat. ii. 704, 4. Fabr. Sp. Ins. ii. 314, 5. Mant. Ins. ii. 313, 5. Ent. Syst. iv. 35. Syst. Rhyn. 2, 5. Gmel. Ed. Syst. Nat. i. 4, 2090, 4.

O Fulgora adscendens, Fabr. Mant. Ins. ii. 260, 11. Ent. Syst. iv. 4, 11. Syst. Rhyn. 3, 11. Gmel. Ed. Syst. Nat. i. 4, 2090, 13. Cicada filirostris, De Geer, xix. Ins. iii. 201, 4, pl. 32, f. 21. Stoll,

Cic. 42, pl. 9, f. 42, 43.

Tettigonia adscendens, Germ. Mag. Ent. iv. 58, 1. Tettigonia phosphorea, Burm. Handb. Ent. ii. 1, 120, 10.

a. Brazil.

### 3. Rhaphirhinus diadema.

ØTettigonia diadema, Burm. Handb. Ent. ii. 1, 120, 10. Monte Video.

### 4. RHAPHIRHINUS? PARVUS.

Fulgora parva, Donov. Ins. New Holl. Hem. pl. 1, f. 2.
 New Holland.

### 5. Rhaphirhinus angustus.

Albidus, gracilis; caput nigro vittatum; thoracis latera et pectoris discus picea; abdomen supra luteum, piceo bivittatum; pedes tibiis tarsisque apice nigris; alæ anticæ fuscæ; alæ posticæ sublimpidæ, fusco marginatæ.

Whitish, very slender: head conical, very slightly curved upward, with a broad black stripe, and a narrow longitudinal furrow, terminating in a long, slender, filiform horn, which is much curved upward, and has a black stripe on each side; face flat and finely shagreened on the disk, with strongly marked, oblique ridges on each side, adorned with two arched, black bands; epistoma black: mouth yellow: sides of the chest and disk of the breast pitchy: back of the abdomen luteous, pitchy along each side and at the tip: tips of the shanks and of the feet black; tips of the fore-shanks widened: fore-wings dark brown: hind-wings almost colourless, brown at the tips and along the hind borders. Length of the body 6 lines; of the wings 10 lines.

a. ——? Presented by the Entomological Club.

# 6. Rhaphirhinus attenuatus,

Ater, gracilis, abdomen piceo vittatum; pedes picei; alæ anticæ cyaneo-nigræ, nigro-cupreo vittatæ; alæ posticæ cyaneo-limpidæ, apice fuscæ.

Deep black, slender: head prismatic, smooth, shining, long-conical, horizontal, and with a narrow longitudinal furrow along half the length, concave on each of the four sides, much curved upward, and linear from thence towards the tip, which is conical; disk of the face convex; ridges on each side very indistinct: abdomen tapering from the base to the tip; hind borders of the segments pitchy: legs pitchy: fore-wings bluish black, with a slightly oblique, bronze-black stripe; hind-wings transparent, tinged with blue: tips brown. Length of the body 7 lines; of the wings 9 lines.

a. West Coast of America. Presented by Capt. Wood and Lieut. Wood.

# 7. Rhaphirhinus brevis.

Piceus, fusiformis; caput ferrugineum; alæ latæ; apice cyaneopruinosæ; alæ posticæ fuscæ.

Pitchy, rather stout: head dark ferruginous, conical, obliquely inclined upward, linear near the tip, which is truncated; disk of the face convex, finely striated; ridges on each side very indistinct; epistoma pitchy: shield thickly punctured; scutcheon with a middle transverse furrow: abdomen tapering from the base to the tip: tips of fore-shanks very slightly widened: fore-wings broad, punctured till near their tips, which are covered with a bluish bloom: hind-wings very broad, dark brown, tinged with blue towards the tips of the fore-borders. Length of the body 6 lines; of the wings 10 lines.

u-c. Venezuela. From Mr. Dyson's collection.d. Columbia. From Dr. Cuming's collection.

### O Genus 9. ACOPSIS.

Acopsis, Amyot et Serv. Hist. Nat. Hém. 574, 472.

## 1. Acopsis viridicans.

Acopsis viridicans, Amyot et Serv. Hist. Nat. Hém. 574, 1. Isle of France.

## Genus 10. AGLENA.

Aglena, Amyot et Serv. Hist. Nat. Hém. 575.

Cicada, p., Fabr., Germ. Iassus, p., Herr.-Schæff.

Aglena, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 222, 480.

#### 1. AGLENA ACUMINATA.

Aglena ornata, Amyot et Serv. Hist. Nat. Hém. 575, 1, pl. 11, f. 6. Tassus ornatus, Fried. MSS. Herr.-Schaff. Faun. 154, 1.

Cicada acuminata, Fabr. Ent. Syst. iv. 36, 40. Syst. Rhyn. 76, 68. Germ. Mag. Ent. iv. 72, 27.

South Europe.

### Genus 11. DILOBOPTERUS.

Dilobopterus, Signoret, Revue Zoologique, 2me Série, ii. 284, 1850. ©Tettigonia, p., Klug, Burm.

### DILOBOPTERUS DECORATUS.

Dilobopterus decoratus, Signoret, Rev. Zool. 2me Série, ii. 1850, 285, 1, pl. 4, f. 3.

Brazil.

## 2. DILOBOPTERUS BIMACULATUS.

Dilobopterus himaculatus, Signoret, Rev. Zool. 2me Série, ii. 1850, 286, 2, pl. 4, f. 4.

Rio Janeiro.

## 3. DILOZOPTERUS BURMEISTERI.

Dilobopterus Burmeisteri, Signoret, Rev. Zool. 2me Série, ii. 1850, 286, 3, pl. 4, f. 5.

#### 4. DILOBOPTERUS KLUGI.

Dilobopterus Klugi, Signoret, Rev. Zool. 2me Série, ii. 1850, 287, 4, pl. 4, f. 6.

Cayenne.

### 5. DILOBOPTERUS STOLLI.

Dilobopterus Stolli, Signoret, Rev. Zool. 2me Série, ii. 1850, 287, 5, pl. 4, f. 7.

Columbia.

### 6. DILOBOPTERUS HEXAPTERUS.

Dilobopterus hexapterus, Signoret, Rev. Zool. 2me Série, ii. 1850, 288, 6.

Tettigonia hexaptera, Klug, Burm. Handb. Ent. ii. 118, 5.

Cicada hexaptera, Stoll, Čic. Pl. 27, f. 162.

a-c. Parà. From Mr. Stevens' collection.

## 7. DILOBOPTERUS TRIFASCIATUS.

Dilobopterus trifasciatus, Signoret, Rev. Zool. 2me Série, ii. 1850, 288, 7, pl. 4, f. 8, 9.

Brazil.

#### 8. DILOBOPTERUS FERVENS.

Niger, flavo-fasciatus; scutellum flavo bivittatum; abdomen luteum; pedes flavi, tibiis posticis basi apiceque piceis; alæ anticæ luteæ, basi et costa ferrugineæ, apice luridæ, fasciis obliquis unâ flavâ, duabusque nigris ornatæ; alæ posticæ sublimpidæ, lobis nigris basi ferrugineis.

Black: head with a yellow band along the hind border; face yellow, with two black stripes: mouth yellow, luteous at the tip: fore-chest and shield with yellow bands along their hind borders; scutcheon with a yellow stripe along each side, and with a yellow band near the tip, which is also yellow: breast with two yellow bands on each side: abdomen luteous: legs yellow; tips of the thighs luteous; hind-shanks pitchy at the base and at the tips: fore-wings luteous, ferruginous at the base and along part of the hind border; veined part lurid, mostly divided from the basal part by a black, oblique, almost triangular band, which encloses a yellow band: hind-wings almost colourless, lurid along the hind border near the base; lobes black, ferruginous towards the base. Length of the body 5 lines; of the wings 11 lines.

a. Parà. From Mr. Stevens' collection.

STOP

Group 2. SCARIDES.

Scarides, Amyot et Serv. Hist. Nat. Hém. 576.

## Genus 1. LEDRA.

Ledra, Fabr., Panz., Latr., Germ., Burm., Curt., Tign., Duf., Guér.
Blanch., Costa, Amyot et Serv., Crochard.
Cicada, Linn., Stoll, Geoff., Oliv.

Group 1. Head angular on each side: thorax more or less crested.

### 1. LEDRA AURITA.

Ledra aurita, Fabr. Syst. Rhyn. 24, 4, 1. Germ. Mag. Ent. iv. 54, 16, 1. Burm. Handb. Ent. ii. 1, 116, 1. Curt. Brit. Ent. 676. Panz. Faun. Germ. 50, 18. Tign. Ins. 12, pl. 5, f. 4. 3 B 3

Latr. Gen. iii. 158, 1. Duf. Rech. Hém. 98, 1. Guér. Icon. Règ. An. pl. 51, f. 7. Blanch. Hist. Nat. Ins. 194, pl. 15, f. 2. Amyot et Serv. Hist. Nat. Hém. 577. Costa, Fn. Reg. Nat. Ins. Emit. Labor. Costant Ins. pl. 98, f. 7.

Ins. Emit. Ledra. Crochard, Ins. pl. 98, f. 7.

Cicada aurita, Linn. Syst. Nat. ii. 706, 7. Fabr. Sp. Ins. ii. 317, 7. Mant. Ins. ii. 263, 13. Ent. Syst. iv. Gmel. Ed. Syst. Nat. i. 4, 2095, 7. Schreb. Ins. 8, f. 1, 2. Sulz. Hist. Ins. pl. 9, f. 7. Schæff. Icon. pl. 96, f. 3. Stoll, Cic. 30, pl. 4, f. 22. Geoff. Ins. ii. 422, 17, pl. 3, f. 1. Oliv. Enc. Méth. vii. 666, 26.

Membracis aurita, Petagna, Inst. 617, 1.

OLedra, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 198, 434.

a-c. England. d, e. France.

#### 02. LEDRA PERDITA.

Ledra perdita, Amyot et Serv. Hist. Nat. Hém. 577, 2, pl. 11, f. 5.

N. America.

### 0 3. LEDRA DORSALIS. N.S.

Ferruginea, subtus testacea; scutellum sex-cristatum; fem. abdomen vix caudatum; pedes testacei; alæ anticæ tuberculatæ, apice sublimpidæ; alæ posticæ sublimpidæ.

Ferruginous, testaceous beneath: head a little broader than the chest, very slightly arched, almost semicircular in front, obtusely angular on each side, slightly concave on the hind border; its length hardly half its breadth; three broad low rounded ridges on the crown, the side pair oblique; face with three black stripes corresponding to the ridges above: shield roughly punctured, slightly convex in front, very concave on the hind border, armed with six crests, outer pair irregular, horizontal and oblique; next pair vertical, very high, marked with black, convex above, perpendicular, and forming right angles behind; inner pair slight, interrupted, with two black dots on each towards the hind border; scutcheon convex: abdominal appendages short: legs testaceous: fore-wings ferruginous, tuberculate especially towards the base, almost colourless towards the tips: hind-wings almost colourless. Length of the body 10 lines; of the wings 18 lines.

a. Silhet. From the Rev. J. Stainforth's collection.

## VO 4. LEDRA GIBBA.

Testacea; caput quadricarinatum, postice nigro marginatum, subtus nigrum testaceo trivittatum; scutum nigro varium, bicristatum; scutellum apice subgibbum; pectus nigrum, lateribus testaceis; abdomen rufum, subtus nigrum testaceo fasciatum; pedes rufo guttati; alæ anticæ sublimpidæ, basi ferrugineæ, ad costam piceo unimaculatæ; alæ posticæ limpidæ.

Testaceous: head not broader than the chest, very slightly arched, somewhat obtusely angular on the fore border and on each side, black, and very slightly concave on the hind border, with four irregular ridges, two on each side diverging from the hind border; its length full half its breadth; underside black, with three pale testaceous stripes: shield very slightly convex along the fore border, marked here and there with black, armed with two very high conical slightly diverging and inclined backward crests, whose height is not much less than their length; scutcheon slightly gibbous towards the tip: breast black; sides mostly testaceous: abdomen red above, black beneath, with a testaceous band on the hind border of each segment: legs pale testaceous, dotted with red; shanks with a few pitchy tubercles: fore-wings almost colourless, punctured and pale ferruginous towards the base, with a large pitchy spot beyond the middle of the fore border; veins ferruginous, strongly marked: hind-wings colourless. Length of the body  $4\frac{1}{2}$  lines; of the wings 8 lines.

a. Philippine Islands. From Mr. Wood's collection.

## 0 5. LEDRA DILATATA.

Testacea, ferrugineo tuberculata; caput tricarinatum; scutum convexum, quinquecarinatum, fasciatum, transversè foveolatum; scutellum apice gibbum bicristatum; abdomen supra rufum; tibiæ subdilatatæ, ciliatæ; alæ anticæ albidæ, venis basi piceo tuberculatis; alæ posticæ limpidæ.

Testaceous, paler beneath: head and chest beset with ferruginous tubercles: head broader than the chest, very slightly arched, almost semicircular on the fore border, somewhat angular on each side, very slightly concave on the hind border, with three slight ridges, the side pair short and oblique; its length hardly half its breadth: shield convex on the disk, furrowed across, very slightly convex along the fore border, with a pale band in the disk, which

has five slight ridges, the middle one short: hind border concave in the middle, convex on each side; scutcheon gibbous, and with two slight crests towards the tip: abdomen red above: shanks with pitchy tubercles, slightly widened and fringed: fore-wings whitish, very convex along the fore borders towards the tips; veins pale ferruginous, with a few pitchy tubercles towards the base; areolets more or less subdivided by ramifying veinlets: hind-wings colourless. Length of the body 5 lines; of the wings 12 lines.

a. East Indies. From Mr. Sowerby's collection.

### 6. LEDRA SCUTELLATA.

Testacea, tuberculata; caput subtus albo vittatum nigro fasciatum; scutum quinquecarinatum, ferrugineo et piceo varium; scutellum apice gibbum piceum; abdomen rufo fasciatum; tibiæ subdilatatæ; alæ anticæ albidæ; alæ posticæ limpidæ.

Testaceous: head and chest tuberculate: head broader than the chest, slightly arched, ferruginous behind, very short-conical in front, rounded on each side, very slightly concave on the hind border, with a slight middle ridge; its length about half its breadth; underside with a whitish ridge in front, and with a black band before the eyes: shield partly ferruginous and pitchy, very slightly convex in front, with five very slight ridges, the middle one very short; hind border concave in the middle, convex on each side; scutcheon depressed on the disk, gibbous and pitchy towards the tip: sides of the breast grayish: abdomen with a red band on the hind border of each segment: shanks with pitchy tubercles, slightly widened: fore-wings whitish; areolets with green ramifications, which are confluent towards the base; veins tawny, nodose, partly pitchy; fore borders rounded towards the tips: hind-wings colourless. Length of the body  $9\frac{1}{2}$  lines; of the wings 18 lines.

a. East Indies. From Archdeacon Clerk's collection.

#### 707. LEDRA PLANA.

Testacea, tuberculata; caput subtus albido vittatum; scutum quinquecarinatum; scutellum apice piceum subgibbum; abdomen rufo fasciatum; tibiæ subdilatæ; alæ anticæ albidæ, basi subtestaceæ; alæ posticæ limpidæ.

Nearly allied to L. scutellata; head rather narrower and longer. Testaceous: head and chest tuberculate: head hardly broader than

the chest, slightly arched, short-conical in front, rounded on each side, very slightly concave on the hind border, with a slight middle ridge; its length a little more than half its breadth; underside with a whitish middle ridge: shield very slightly convex in front, with five very slight ridges, the middle one indistinct and very short; hind border concave in the middle, convex on each side; scutcheon depressed on the disk, pitchy and slightly gibbous towards the tip: abdomen with a red band on the hind border of each segment: shanks with pitchy tubercles, slightly widened: fore-wings whitish, slightly testaceous rowards the base; veins pale ferruginous, nodose, partly pitchy; fore borders rounded towards the tips: hind-wings colourless. Length of the body  $8\frac{1}{2}$  lines; of the wings 17 lines.

a. East Indies. From Mr. Sowerby's collection.

#### Group 2. Head long, somewhat keeled.

8. LEDRA CAUDATA.

Ferruginea, nigro tuberculata, subtus testacea nigro varia; scutum convexum, rugosum; scutellum apice convexum, fulvum et nigro bivittatum; abdomen ferrugineo fasciatum; fem. apice caudatum; pedes testacei, nigro varii; alæ anticæ piceo-luridæ; alæ posticæ fuscæ.

Ferruginous: head and chest thickly covered with very small black tubercles: head short-conical, as broad as the chest, very slightly arched, very concave along the hind border, convex on each side, with a very slight middle ridge; its length about half its breadth; underside black on each side of the disk of the fore part; face testaceous, streaked with black towards the epistoma, which is black: shield flat in front, convex, rugose and pitchy behind, short on each side, very convex on the fore border, concave in the middle and convex on each side of the hind border; scutcheon flat, tawny, convex, and with a black stripe on each side towards the tip: breast testaceous; disk mostly black: abdomen black; hind borders of the segments ferruginous; underside with ferruginous dots on each side; the ferruginous hue is predominant towards the tip; caudal appendages compressed, as long as the abdomen: legs testaceous, varied with black: fore-wings pitchy; areolets mostly lurid, with pitchy spots along the fore border and at the tip; fore border convex towards the tip: hind-wings brown. Length of the body 1212 lines; of the wings 17 lines.

a. New Holland. Presented by the Haslar Hospital.

## 9. LEDRA VALIDA.

Piceo-ferruginea, subtus testacea; scutellum luteo maculatum; abdomen supra nigrum; fem. apice caudatum; pedes piceo-testacei; alæ anticæ ferrugineæ, ad costam nigro maculatæ; alæ posticæ subfuscæ.

Ferruginous, partly pitchy: head hardly conical, as broad as the chest, very slightly arched, concave along the hind border, convex on each side, almost obtusely angular on the fore border, with an indistinct middle line, but no ridge; its length full half its breadth; underside testaceous, excepting the fore-plate, whose disk has a black stripe on each side; disk of the epistoma black: shield transversely rugose, flat in front, slightly convex behind, short on each side, very convex on the fore border, slightly concave in the middle, and slightly convex on each side of the hind border; scutcheon flat, with a luteous spot in the disk: breast testaceous: abdomen black beneath, with a testaceous tip; a row of testaceous spots along each side, and a short testaceous stripe in the disk; caudal appendages compressed, as long as the abdomen: legs testaceous, partly pitchy: fore-wings marked with black along the fore border, which is convex towards the tip: hind-wings pale brown. Length of the body  $11\frac{1}{2}$  lines; of the wings 16 lines.

a. ——? From Mr. Argent's collection.

#### √010. LEDRA CORTICALIS.

Ferruginea, nigro maculata, subtus testacea; caput nigro vittutum; scutum subconvexum; abdomen supra nigrum; fem. apice caudatum; pedes testacei, piceo cincti; alæ anticæ piceæ, apice limpidæ; alæ posticæ subcinereæ.

Ferruginous, testaceous beneath: head and chest thickly covered with very small black marks: head short-conical, as broad as the chest, flat, extremely concave along the hind border, very slightly impressed on each side, with a very slight black middle stripe, but no ridge; its length not one-third of its breadth; underside testaceous, irregularly bordered with black; a black mark on each side of the epistoma: shield finely striated across, flat in front, slightly convex behind, short on each side, extremely convex on the fore border, slightly concave in the middle of the hind border: scutcheon flat: back of the abdomen black; caudal appendages compressed, shorter than the abdomen; oviduct ferruginous: legs testaceous;

a pitchy spot near the tip of each of the anterior thighs; tips of the shanks and of the hind thighs pitchy: fore-wings pitchy; areolets mostly colourless along the fore border and towards the tip; fore border hardly convex: hind-wings slightly gray. Length of the body  $7\frac{1}{2}$  lines; of the wings 12 lines.

a. New Holland. Presented by the Entomological Club.

## 11. LEDRA FORNICATA.

Ferruginea, testacea, subtus tuberculata; caput subtus albido vittatum; scutum convexum, tricarinatum; scutellum apice gibbum bicristatum; abdomen supra rufum; tibiæ subdilatatæ; alæ anticæ albidæ, basi piceo tuberculatæ; alæ posticæ limpidæ.

Pale ferruginous, pale testaceous beneath: head and chest tuberculate: head very little broader than the chest, slightly arched, whitish in front, conical on the fore border, rounded on each side, very slightly concave on the hind border, with a slight middle ridge; its length much more than half its breadth; underside with a whitish middle ridge: shield convex on the disk, very slightly convex along the fore border, with three very slight ridges: hind border concave in the middle, convex on each side; scutcheon gibbous, and with two crests towards the tip: abdomen red above; shanks with pitchy tubercles, slightly widened: fore-wings whitish, with pitchy tubercles towards the base; areolets with tawny ramifications, which are confluent towards the base; veins pale ferruginous: hindwings colourless. Length of the body  $8\frac{1}{2}$  lines; of the wings  $14\frac{1}{2}$  lines.

a. North India. From Mr. Warwick's collection.

## 012. LEDRA CARINATA.

Testacea, ferrugineo tuberculata; caput subtus albidum; scutum convexum, quadricarinatum; scutellum apice convexum bicristatum; abdomen supra rufum; tibiæ subdilatatæ; alæ anticæ albidæ, basi tuberculatæ; alæ posticæ limpidæ.

Testaceous, paler beneath: head and chest beset with ferruginous tubercles: head shorter than that of L. fornicata, very little broader than the chest, slightly arched, short-conical on the fore border, rounded on each side, very slightly concave on the hind border, with a slight middle ridge; its length more than half its

breadth; middle ridge beneath and face whitish: shield convex on the disk, very slightly convex along the fore border, with four slight ridges; hind border concave in the middle, convex on each side: scutcheon convex, and with two slight crests towards the tip: abdomen red above: shanks tuberculate, slightly widened: fore-wings whitish, tuberculate towards the base; areolets with tawny ramifications, which are confluent towards the base; veins pale ferruginous; hind-wings colourless. Length of the body 6 lines; of the wings 14 lines.

a. North Bengal. From Miss Campbell's collection.

13. LEDRA RUGOSA.

Picea, angusta; caput subtus testaceum; scutum convexum, tricarinatum; scutellum apice subconvexum; abdomen supra rufo fasciatum; tibiæ subdilatatæ, ciliatæ; alæ anticæ apice sublimpidæ; alæ posticæ subcinereæ.

Allied to the genus Ledropsis. Pitchy, narrow, paler beneath: head very little broader than the chest, much arched, conical in front, rounded on each side, very slightly concave on the hind border; its length much more than half its breadth; middle ridge beneath and face pale testaceous: shield convex, almost flat in front, with three very slight longitudinal ridges; scutcheon slightly convex at the tip: abdomen above with a red band on the hind border of each segment: shanks slightly widened and fringed: fore-wings almost colourless towards the tips, very convex towards the tip of the fore border; veins pitchy, strongly marked, partly ferruginous: hindwings slightly gray. Length of the body 7 lines; of the wings 12 lines.

a. Ceylon. From Mr. Gardener's collection.

Group 3. Head flat, short, broad.

14. LEDRA PLANIROSTRIS.

Note.—In the second part of the Catalogue this Ledra is cited by mistake as a doubtful species as Omalocephala.

a, b. New Holland. Presented by Major General Hardwicke. c. New Holland.

## 15. LEDRA FERRUGINEA.

Testacea, subtus flava; caput nigro vittatum, subtus nigro fasciatum; thorax depressus, transversè striatus; scutum nigro quinquevittatum; abdomen nigrum, apice ferrugineum, subtus flavum nigro vittatum; pedes flavi; femoribus tibiisque posterioribus apice nigris; alæ anticæ ferrugineæ, apice sublimpidæ; alæ posticæ sublimpidæ, basi subfulvæ.

Nearly allied to L. planirostris, but the head is longer. Testaceous, yellow beneath: head not broader than the chest, not arched, very slightly concave above, finely striated longitudinally, conical on the fore border, almost straight on each side, very concave on the hind border, with a black middle stripe; its length not more than one-third of its breadth; on each side of the fore border a spindleshaped concave compartment, whose disk is black; face with a slight keel, black along the front; epistoma with a black stripe on each side: chest almost flat, finely striated transversely; shield almost conical along the fore border, with five slight black stripes; middle one in front, very short; inner pair zigzag; outer pair short, irregular; hind border concave in the middle, convex on each side: abdomen black above with a ferruginous tip, yellow, with a broad black stripe beneath: legs yellow; posterior thighs and shanks with black tips: fore-wings ferruginous, with almost colourless tips: hind-wings almost colourless, with a tawny tinge towards the base. Length of the body  $9\frac{1}{2}$  lines; of the wings 17 lines.

a. Van Dieman's Land. From Mr. Shuckard's collection.

## 16. Ledra depressa.

Ferruginea, subtus testacea; caput nigro vittatum, subtus nigro fasciatum; thorax depressus, transversè striatus; scutum piceo quinquevittatum; abdomen subtus nigro vittatum; pedes testacei; femoribus posterioribus tibiisque posticis apice nigris; alæ anticæ ferrugineæ, apice sublimpidæ; alæ posticæ sublimpidæ.

Like L. planirostris in structure. Pale ferruginous, testaceous beneath: head not broader than the chest, not arched, hardly concave above, finely striated longitudinally, short-conical on the fore border, very slightly convex on each side, very concave on the hind border, with a black middle stripe; its length not more than one-

fourth of its breadth; on each side of the fore border a spindle-shaped concave compartment, whose disk is black; face with a slight keel, black along the front and towards the epistoma, which has a black stripe on each side: chest almost flat, finely striated transversely; shield almost conical along the fore border, with five slight pitchy stripes; middle one in front, very short; inner pair zigzag; outer pair short; hind border concave in the middle, convex on each side: abdomen with a black stripe beneath: legs pale testaceous; tips of the posterior-thighs and of the hind-shanks black: fore-wings ferruginous, with almost colourless tips: hind-wings almost colourless. Length of the body  $8\frac{1}{2}$  lines; of the wings 15 lines.

a. Van Dieman's Land. Presented by R. Butler, Esq.

## 17. Ledra conferta.

Ferruginea, nigro tessellata et vittata, subtus testacea; facies nigro interruptè fasciata; abdominis segmenta testaceo fasciata et utrinque maculata; pedes femoribus posterioribus tibiisque posticis apice nigris; alæ anticæ viridi-testaceæ, nigro tessellatæ, apice sublimpidæ, alæ posticæ limpidæ.

Ferruginous, tessellated with black, testaceous beneath: head very short, not broader than the chest, not arched, very slightly concave above, finely striated longitudinally, short-conical on the fore border, slightly convex on each side, very concave on the hind border, with a black middle stripe; its length hardly more than onesixth of its breadth; on each side of the fore border a spindleshaped concave compartment, whose disk is black; face hardly keeled, with a short slender interrupted black band towards the front; epistoma with a black stripe on each side, and a black tip: chest flat, finely striated transversely; shield conical along the fore border, with five slight black stripes; middle one in front, very short; inner pair zigzag; outer pair indistinct; hind border concave in the middle, convex on each side: hind borders of abdominal segments, a row of spots along each side and tip testaceous: legs pale testaceous; a black spot near the tip of each of the posterior thighs; tips of the hind-shanks black: fore-wings greenish testaceous, tessellated with black, almost colourless towards the tips, slightly convex along the fore border; veins pitchy, with numerous pale bands: hind wings colourless. Length of the body 7½ lines; of the wings 14 lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

## 18. LEDRA UNICOLOR.

Ferruginea, piceo tessellata, nigro vittata, subtus testacea; facies nigro interruptè fasciata; pedes testacei, tibiis posticis apice piceis; alæ anticæ albidæ; alæ posticæ limpidæ.

Ferruginous: head and chest indistinctly tessellated with pitchy colour, testaceous beneath: head very short, not broader than the chest, not arched, flat above, finely striated longitudinally, short-conical on the fore border, very slightly convex on each side, very concave on the hind border, with a black middle stripe; its length much less than one-sixth of its breadth; on each side of the fore border a spindle-shaped concave compartment; face hardly keeled, with a short oblique black band on each side in front; epistoma with a black stripe on each side: chest flat, finely striated transversely; shield conical along the fore border, with three slight black stripes; middle one short in front; side pair indistinct, zigzag; hind border concave in the middle, convex on each side: legs pale testaceous; tips of the hind-shanks pitchy: fore-wings whitish; veins ferruginous: most of the areolets partly subdivided by ferruginous ramifications: hind-wings colourless. Length of the body  $7\frac{1}{2}$ lines; of the wings 14 lines.

a. Philippine Islands. Presented by J. C. Bowring, Esq.

## 6 19. LEDRA VARIA.

Testacea, ferrugineo tessellata, nigro vittata, subtus nigro varia; pedes tibiis posticis femoribusque apice nigris, tibiis posticis piceis; alæ anticæ sublimpidæ basi vittaque piceis; alæ posticæ limpidæ.

Testaceous: head and chest indistinctly tessellated with ferruginous: head very short, not broader than the chest, not arched, very slightly concave above, finely striated longitudinally, short-conical on the fore border, very slightly convex on each side, very concave on the hind border, with a black middle stripe and two pitchy slightly oblique side stripes; its length less than one-fourth of its breadth; on each side of the fore border a spindle-shaped concave compartment whose disk is black; underside yellow or pale testaceous, with a broad black band along the fore border; face black and finely striated transversely towards the epistoma, which is black, with a tawny spot, and has a black stripe on each side: chest almost flat, finely striated transversely; shield conical along the fore border,

with five black strlpes; middle one short in front; inner pair zigzag; outer pair irregular; hind border concave in the middle, convex on each side: scutcheon with a triangular pitchy spot on each side: breast yellow or pale testaceous, with a black disk: disk of the abdomen beneath black, excepting the hind borders of the segments: thighs black towards the tips; hind-thighs pitchy; hind-shanks with black tips: fore-wings almost colourless, pitchy towards the base, and with a pitchy stripe in the disk; veins ferruginous, here and there pitchy: hind-wings colourless. Length of the body  $5\frac{1}{2}$  lines; of the wings 12 lines.

 $\sqrt{O}$  Var.  $\beta$ . Head and chest mostly ferruginous: head beneath and sides of the breast yellow.

a. Van Dieman's Land. Presented by the Rev. T. Ewing.b. Van Dieman's Land. Presented by R. Butler, Esq.

#### 20. LEDRA BREVIS.

Testacea, ferrugineo tessellata, nigro vittata, subtus nigra; abdominis segmenta subtus albido vittata; femora nigra; alæ anticæ sublimpidæ, piceo vittatæ et fasciatæ, ad costam albido guttatæ; alæ posticæ limpidæ.

Testaceous, black beneath: head and chest tessellated with ferruginous: head very short, not broader than the chest, not arched, very slightly concave above, finely striated longitudinally, semicircular on the fore border, very concave on the hind border, with a black middle stripe, its length less than one-sixth of its breadth; on each side of the fore border a spindle-shaped concave compartment: face with two very broad, pale testaceous stripes, which are continued along the breast; chest flat, finely striated transversely: shield conical along the fore border, with three black stripes; middle one short, in front; side pair zigzag, each accompanied by a yellow stripe; hind border concave in the middle, convex on each side; scutcheon with a black triangular spot on each side; hind borders of the abdominal segments whitish beneath: legs testaceous; thighs mostly black: fore-wings almost colourless, with a pitchy spot near the base, and a pitchy, oblique band beyond the iniddle; some whitish dots along the fore border: hind-wings co-Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

a. New Holland. From Mr. Lambert's collection.

## V 0 21. LEDRA COSTALIS.

Testacea, nigro vittata, subtus nigra; facies nigro fasciata; pectus et abdomen subtus albido bivittata; femora antica tibiæque posticæ apice femoraque posteriora nigra; alæ limpidæ; alæ anticæ nigro bivittatæ.

Testaceous, black beneath: head and chest irregularly marked with black: head very short, not broader than the chest, not arched, hardly concave above, finely striated longitudinally, shortconical on the fore border, very concave on the hind border, with five black stripes; its length about one-sixth of its breadth; on each side of the fore border a spindle-shaped concave compartment whose disk is black; face with a very broad, arched, yellow band, joining on each side of the breast a broad, whitish stripe, which has two pitchy dots: chest almost flat, finely striated transversely; shield conical along the fore border, with black, irregular stripes; hind border concave in the middle, convex on each side; scutcheon with a black stripe, which is forked towards the hind border, with a pitchy, forked mark on each side of the disk, and with a black, triangular spot on each side: abdomen black above, with a broad, whitish stripe on each side: legs pale testaceous; posterior thighs mostly black; a black spot on each of the fore-thighs; tips of the hind-shanks black: fore-wings colourless, with a very slender interrupted black stripe along half the length of the fore border, and along the hind border a very broad, interrupted, black stripe, which contains many pale dots; veins with alternate whitish and pitchy bands: hindwings colourless. Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

#### a. New Holland.

## 22. LEDRA AUSTRALIS.

Testacea, nigro tessellata et vittata, subtus nigra testaceo bivittata; scutellum nigro-bimaculatum; abdomen subtus testaceo fasciatum; femora nigra; alæ anticæ sublimpidæ, basi subferrugineæ, ad costam piceo maculatæ; alæ posticæ limpidæ.

Testaceous, black beneath: head and chest tessellated with black: head very short, not broader than the chest, not arched, very slightly concave above, finely striated longitudinally, very short-conical on the fore border, very concave on the hind border, with a

black middle stripe; its length less than one-sixth of its breadth; on each side of the fore border a spindle-shaped concave compartment; face with two broad, pale testaceous stripes, which are continued along the breast: chest almost flat, finely striated transversely: shield conical along the fore border, with three black stripes; middle one short in front; side pair zigzag; hind border concave in the middle, convex on each side; scutcheon with a black triangular spot on each side: hind borders of the ventral abdominal segments testaceous: legs luteous; thighs black: fore-wings almost colourless, pale ferruginous towards the base, with a pitchy spot beyond the middle of the fore border; veins ferruginous: hind-wings colourless. Length of the body 5 lines; of the wings 10 lines.

a. New Holland. From Mr. Argent's collection.

23. Ledra ——? Pupa.

a—c. Van Dieman's Land. From Dr. Hooker's collection.
d. Van Dieman's Land. Presented by the Rev. T. Ewing.
e. Van Dieman's Land. Presented by R. Butler, Esq.

24. Ledra ——? Pupa.

a. New Holland. Presented by the Earl of Derby.

25. Ledra ——? Pupa.

a. New Holland. Presented by the Entomological Club.

26. Ledra ———? Larva.

a. ——?

27. Ledra ——? Larva.

a. Van Dieman's Land. From Mr. Shuckard's collection.

28. LEDRA - ? Pupa.

a. Interior of South Africa. Presented by the Earl of Derby.

Group 4. Body generally slender, small, pale: head conical.

29. LEDRA FUSIFORMIS.

Testacea, fusiformis, punctata; scutellum foveolatum, luteo fasciatum; alæ anticæ subtestaceæ, punctatæ; alæ posticæ sublimpidæ.

Testaceous, spindle-shaped: head and chest very thickly punctured: head flat, long-conical, a little narrower than the chest, very slightly arched, very slightly concave along the hind border, with an indistinct middle ridge; its length almost equal to its breadth; underside with a middle ridge, which tapers from the face to the fore border; face with a slight longitudinal furrow: chest almost flat; shield with three indistinct longitudinal furrows, and with two indistinct pale luteous bands, the first on the fore border: legs pale testaceous: fore-wings slightly testaceous, very thickly punctured: hind-wings almost colourless. Length of the body  $6\frac{1}{2}$  lines; of the wings 10 lines.

Var. β. No band on the fore border of the shield. a, b. Hong Kong. Presented by J. C. Bowring, Esq.

#### 30. LEDRA CONICA.

Testacea, punctata, subfusiformis, depressa; caput conicum; alæ anticæ sublimpidæ, confertim punctatæ, basi et ad costam testaceæ; alæ posticæ albæ.

Pale testaceous, flat, almost spindle-shaped: head and chest thickly and minutely punctured: head conical, almost as broad as the chest, not arched, slightly concave along the hind border, with a very indistinct middle ridge; its length more than half its breadth; fore border ferruginous; a slight middle ridge in front along the under side; face very narrow: scutcheon with a slight arched transverse suture: abdomen narrower than the chest: forewings almost colourless, thickly punctured from the base to the tips, pale testaceous towards the base and along the fore border: hindwings white. Length of the body 6 lines; of the wings  $9\frac{1}{2}$  lines.

a. Ceylon. Presented by Dr. Hooker.

### 31. LEDRA LATIFRONS.

Testacea, punctata; caput margine antico ferrugineum; scuti latera nigra; scutellum piceo bimaculatum; alæ anticæ subtestaceæ, punctatæ, ferrugineo marginatæ; alæ posticæ limpidæ.

Testaceous, paler beneath, tapering from the chest to the tip of the abdomen: head and chest thickly punctured: head flat, shortconical, as broad as the chest, hardly arched, ferruginous on the fore border, very slightly concave along the hind border, with an indistinct middle ridge; its length a little less than half its breadth; underside with a slight middle ridge, and with a short ridge on each side: chest very slightly convex; sides of the shield black; scutcheon with an oblong, pitchy spot on each side: legs pale testaceous: fore-wings slightly testaceous, thickly punctured, with ferruginous borders: hind-wings colourless. Length of the body  $4\frac{1}{2}$  lines; of the wings  $9\frac{1}{2}$  ines.

a. ——?

## 32. LEDRA PUNCTATA.

Testacea, albido reticulata; scutum latum lateribus subangulatis disco viridi; alæ anticæ subvirides, apice fuscæ; alæ posticæ albæ.

Allied to *Epiclines*. Testaceous, paler beneath; head and chest broad, roughly punctured: head very short-conical, narrower than the chest, not arched, hardly ridged, very slightly concave along the hind border, with irregular whitish reticulations; its length less than half its breadth; face with a furrow along each side: shield green on the disk, with irregular whitish reticulations in front and on each side, where it is slightly widened and angular: legs pale testaceous: fore-wings almost colourless, punctured from the base to the tips, tinged with pale green, and along the borders with pale brown; tips darker brown; veins very few: hind-wings white. Length of the body  $3\frac{1}{2}$  lines; of the wings  $7\frac{1}{2}$  lines.

a. Malabar. Presented by T. Ward, Esq.

# 33. LEDRA BREVIFRONS.

Testacea, gracilis; caput subtus nigro bimaculatum; pectoris discus niger; alæ anticæ sublimpidæ, basi et margine flavescentes; alæ posticæ limpidæ.

Male. Testaceous, rather narrow: head flat, short-conical, as broad as the chest, very slightly arched, thickly punctured, very slightly concave along the hind border, with an indistinct middle ridge; its length about half its breadth; two large black spots beneath, united in front, widening thence towards each eye: chest slightly convex, finely striated transversely; shield slightly convex along the fore border: disk of the breast black: abdomen tapering from the base to the tip: fore-wings almost colourless, tinged with yellow towards the base and on the border: hind-wings colourless. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

a. New Holland. From Mr. Argent's collection.

## 34. LEDRA CHLOROCEPHALUS.

Testacea, subfusiformis; caput anticum viride; scutellum postice viridescens; alæ anticæ sublimpidæ, basi testaceæ, apice fuscæ, nigro maculatæ; alæ posticæ limpidæ.

Testaceous, paler beneath, almost spindle-shaped: head and chest thickly punctured: head flat, conical, as broad as the chest, very slightly arched, very slightly concave along the hind border, green in front, with a middle ridge; its length a little more than half its breadth; three ridges beneath, the middle one tapering to the fore border, the side pair curved outward: chest almost flat; shield tinged with green on each side of the hind border: legs pale testaceous: fore-wings almost colourless, testaceous towards the base, brown at the tips, with a small black spot in each disk: hind-wings colourless. Length of the body  $4\frac{3}{4}$  lines; of the wings  $9\frac{1}{2}$  lines.

a. North India. From Mr. Warwick's collection.

## 35. LEDRA CONCOLOR.

Testacea, subfusiformis, punctata; scutum posticè viridescens; scutellum transversè sulcatum; alæ anticæ subtestaceæ, punctatæ; alæ posticæ limpidæ.

Testaceous, almost spindle-shaped: head flat, conical, as broad as the chest, very slightly arched, thickly and minutely punctured, very slightly concave along the hind border, with a slight middle ridge; its length more than half its breadth: chest almost flat; shield transversely striated, tinged with green towards the hind border; scutcheon pale testaceous, with a transverse suture: legs pale testaceous: fore-wings slightly testaceous, thickly punctured: hindwings colourless. Length of the body  $4\frac{1}{2}$  lines; of the wings 8 lines.

a. Van Dieman's Land. Presented by the Entomological Club.

#### \$26. LEDRA TELIFORMIS.

Ferruginea, gracilis, oblanceolata, subtus testacea; pedes testacei; alæ anticæ subferrugineæ, limpido confertim guttatæ; alæ posticæ limpidæ.

Fem.—Ferruginous, slender, oblanceolate, testaceous beneath: head and chest almost flat: head conical, as broad as the chest, shagreened, very concave along the hind border, with a slight middle ridge; its length much less than half its breadth; face minutely punctured: chest finely striated transversely; shield very convex on the fore border, with an indistinct oblique furrow on each side; scutcheon with a transverse furrow: abdomen lengthened and attenuated towards the tip: legs testaceous: wings narrow; forewings pale ferruginous, thickly covered with almost colourless and mostly confluent dots: hind-wings colourless. Length of the body 5 lines; of the wings 8 lines.

a. Van Dieman's Land. Presented by the Rev. T. Ewing.

### / 037. LEDRA NAVICULA.

Ferruginea, gracilis, subtus testacea; scutellum piceo bimaculatum et unifasciatum; pedes testacei; alæ anticæ subferrugineæ; alæ posticæ limpidæ.

Fem.—Ferruginous, slender, oblanceolate, testaceous beneath: head and chest flat: head conical, as broad as the chest, finely stri-

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ated longitudinally, very concave along the hind border, pitchy about the fore border, with a very slight middle ridge; its length full half its breadth; face finely punctured: chest finely striated transversely; shield very convex on the fore border, along each side of which there is a slight furrow; scutcheon with a pitchy spot on each side at the base, and with a pitchy band towards the tip: abdomen lengthened and attenuated towards the tip: legs testaceous; wings narrow: fore-wings pale ferruginous: hind-wings colourless. Length of the body  $6\frac{1}{2}$  lines; of the wings  $9\frac{1}{2}$  lines.

a. New South Wales. From Mr. Pamplin's collection.

## 38. LEDRA LÆVIS.

Ferruginea, punctata, depressa, subfusiformis; alæ anticæ testaceæ, punctatæ; alæ posticæ sublimpidæ.

Ferruginous, flat, almost spindle-shaped: head rather long-conical, almost as broad as the chest, thickly and minutely punctured, not arched, very slightly concave along the hind border, with a very indistinct middle ridge; its length less than its breadth; fore border dark ferruginous; a very slight middle ridge on the underside: chest more thinly and roughly punctured than the head; scutcheon with a slight arched transverse suture: abdomen a little narrower than the chest: fore-wings testaceous, thickly and minutely punctured from the base to the tips: hind-wings almost colourless. Length of the body 6 lines; of the wings  $10\frac{1}{2}$  lines.

a. Philippine Islands. From Mr. Wood's collection.

#### 1) 39. LEDRA CULOBATA.

Testacea, subfusiformis; abdomen nigro septemvittatum; pedes nigro maculati; alæ posticæ limpidæ.

Testaceous, almost spindle-shaped: head conical, as broad as the chest, shagreened, very slightly arched, very slightly concave along the hind border, with a very indistinct middle ridge, on each side of which there is a very slight furrow; its length a little less than its breadth; sides slightly angular; fore part of the underside with slight diverglng ridges, which are at right angles to the slight oblique ridges on each side of the face; a pitchy spot in front of each eye: eyelets near the hind border: chest very slightly convex, hardly striated transversely, indistinctly impressed on each side;

scutcheon with a slight arched transverse suture near the tip: abdomen as broad as the chest, with seven slight black stripes: legs marked with black: fore-wings pale testaceous, not punctured: hind-wings colourless. Length of the body  $4\frac{3}{4}$  lines; of the wings 7 lines.

a. East Indies. From Archdeacon Clerk's collection.

#### 040. LEDRA INVARIA.

Testacea, subfusiformis, nigro punctata; pectus nigro bivittatum; abdominis latera subtus ferruginea; alæ posticæ limpidæ.

Pale testaceous, almost spindle-shaped, flat, thinly covered with black points: head conical, as broad as the chest, not arched nor ridged, very slightly concave along the hind border, near which it is slightly impressed on each side; its length much more than half its breadth; underside convex in the middle: eyelets very near the hind border: scutcheon with a distinct arched transverse suture near the tip: breast with two black spots forming a short stripe on each side: abdomen as broad as the thorax, pale ferruginous on each side beneath: fore-wings not punctured: hind-wings colourless. Length of the body  $4\frac{3}{4}$  lines; of the wings  $7\frac{1}{2}$  lines.

a. ——?

#### 141. LEDRA PARVA.

Testacea, subfusiformis, subtessellata; alæ sublimpidæ; alæ anticæ piceo strigatæ.

Testaceous, almost spindle-shaped, flat, indistinctly and minutely mottled with darker colour: head conical, as broad as the chest, not arched, slightly concave along the hind border, near which it is slightly impressed on each side; its length less than its breadth; middle ridge very slight above, more distinct, but shorter beneath; face with slight oblique ridges: chest with a very indistinct middle ridge; scutcheon with a slight semicircular suture: wings almost colourless; fore-wings with slight pitchy pencillings along the veins, and with some short pitchy streaks along the disk. Length of the body  $4\frac{1}{2}$  lines; of the wings 7 lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

6 42. LEDRA EPISCOPALIS.

Testacea, fusiformis; caput subtus sulcatum; alæ anticæ punctatæ; alæ posticæ sublimpidæ.

Testaceous, spindle-shaped: head and chest minutely punctured: head conical, as broad as the chest, very slightly arched, not ridged, slightly concave along the hind border, very slightly increasing in breadth from the base to the obtuse angle on each side; its length almost equal to its breadth; underside with a longitudinal furrow; face small: shield transversely rugulose towards the hind border; scutcheon with a distinct arched suture across the middle: fore-wings thickly punctured from the base to the tips: hind-wings almost colourless. Length of the body  $4\frac{3}{4}$  lines; of the wings 8 lines.

a. Columbia. From M. Jurgens' collection.

#### 6 43. LEDRA GUTTATA.

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Testacea, fusiformis, nigro punctata; abdomen nigro quinquevittatum; pedes fusco varii; alæ anticæ piceo striyatæ; alæ posticæ sublimpidæ.

Dull testaceous, spindle-shaped: head and chest flat, covered with black points: head short-conical, as broad as the chest, not arched, hardly ridged, very slightly concave along the hind border, which has a black dot; its length about half its breadth; face and epistoma pale testaceous; face with slight oblique pitchy bands on each side; epistoma linear, black and rounded on the fore border: mouth ferruginous: scutcheon with a distinct slightly arched transverse suture: abdomen with five black stripes, the middle one and the inner pair interrupted: legs mottled with brown: fore-wings pale testaceous, not punctured; borders of the areolets with pitchy pencillings; some larger and darker marks along the disk and along the hind border: hind-wings almost colourless. Length of the body 3 lines; of the wings 6 lines.

a. China. Presented by G. T. Lay, Esq.

## 44. LEDRA CUSPIDATA.

Straminea, fusiformis; caput conicum; alæ anticæ sublimpidæ; alæ posticæ limpidæ.

Straw-colour, slender, spindle-shaped: head and chest slightly convex: head conical, as broad as the chest, finely striated longitudinally, very concave on the hind border; its length full half its breadth; on each side of the fore border a narrow concave stripe with a slight rim on each side; underside shagreened, slightly convex; face flat, with a row of short indistinct transverse furrows along each side: shield finely striated transversely, conical on the fore border, concave on the hind border; scutcheon paler than the shield, shagreened, with a curved transverse suture towards the tip: fore-wings almost colourless: hind-wings colourless. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

- a. New Holland.
- b. (Pupa?) New Holland. Presented by the Haslar Hospital.

## √ √ √ 45. LEDRA LINEATA.

Straminea, depressa, fusiformis; alæ anticæ albidæ; alæ posticæ limpidæ.

Straw-colour, spindle-shaped: head and chest flat: head almost smooth, conical, almost as broad as the chest, not arched nor ridged, with a slight rim, hardly concave along the hind border; its length less than its breadth; face flat on the disk, with very oblique and indistinct striæ on each side: shield minutely striated across; scutcheon with a slightly arched transverse suture near the tip: forewings whitish, semitransparent; veins bordered with darker colour: hind-wings colourless. Length of the body  $3\frac{1}{2}$  lines; of the wings 5 lines.

a. North India. From Mr. Warwick's collection.

## Genus 2. LEDROPSIS.

Ledropsis, White, Ann. Nat. Hist. xiv. 245.

#### 1. LEDROPSIS CANCROMA.

Ledropsis cancroma, White, Ann. Nat. Hist. xiv. 245. a. Hong Kong. Presented by J. C. Bowring, Esq.

### 2. Ledropsis naso.

Testacea, fusiformis, punctata; alæ posticæ limpidæ.

Testaceous, slender, spindle-shaped: head and chest convex, thickly and minutely punctured: head long-conical, as broad as the chest, arched, indistinctly ridged, slightly concave along the hind border; its length a little exceeding its breadth; underside with a broad ridge, which tapers from the face to the fore border; face pale testaceous, very narrow; epistoma small: scutcheon small: forewings thickly punctured from the base to the tips: hind-wings colourless. Length of the body 6 lines; of the wings  $8\frac{1}{2}$  lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

## Genus 3. EPICLINES.

Epiclines, Amyot et Serv. Hist. Nat. Hém. 577. ¿Ledra, p., Fabr.

## G. EPICLINES PLANATA.

Epiclines planata, Amyot et Serv. Hist. Nat. Hém. 578. Ledra planata, Fabr. Syst. Rhyn. 25, 3.

a. East India. From Archdeacon Clerk's collection.
 b—e. Tenasserim. Presented by — Packman, Esq.
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## 2. Epiclines obtusa.

Viridis, subtus albido-testacea; capitis thoracisque latera et scutellum ferruginea; pedes testacei, femoribus apice piceis; alæ anticæ marginibus posticis ferrugineis; alæ posticæ sublimpidæ.

Green, whitish testaceous beneath: head and chest thickly punctured: head very short-conical, flat, more than half the breadth of the chest, not arched, ferruginous in front, with a slight ridge towards the fore border; sides parallel for a short space in front of the eyes, then obtusely angular; underside with a ridge which tapers from the face to the fore border, and has a concave space on each side; face with a furrow on each side: chest slightly convex; sides of the shield widened, angular, ferruginous; scutcheon ferruginous: legs pale testaceous; tips of the thighs pitchy: fore-wings pale green, thickly punctured from the base to the tips, ferruginous along the hind borders: hind-wings almost colourless. Length of the body 5? lines; of the wings  $9\frac{1}{2}$  lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

### VOGenus 4. SCARIS.

Scaris, St. Farg. et Serv. Enc. Méth. x. 610. Burm., Amyot et Serv., Blanch.

Iassus, p., Fabr.

### 1. SCARIS FERRUGINEA.

√Scaris ferruginea, St. Farg. et Serv. Enc. Méth. x. 610, 1. Burm. Handb. Ent. ii. 1, 115, 1. Blanch. Hist. Nat. Ins. iii. 195, 1. Hém. pl. 15, f. 3. Amyot et Serv. Hist. Nat. Hém. 579, pl. 11, f. 3.

√ OIassus ferrugineus, Fabr. Syst. Rhyn. 86, 2.

a, b. Brazil.

## 02. Scaris picea.

Picea, convexa, striata, subtus testacea; alæ posticæ limpidæ.

Pitchy, testaceous beneath, narrower than S. ferruginea: head and chest convex, transversely striated: scutcheon punctured to-

wards the fore border, with an arched suture across the middle: legs pale testaceous; spines of the hind-shanks ferruginous, black at the base: fore-wings slightly rugulose towards the base: hind-wings colourless. Length of the body  $4-5\frac{1}{2}$  lines; of the wings 10-12 lines.

a. Brazil. From Mr. Argent's collection. b, c. Brazil.

#### 03. SCARIS LATIPENNIS.

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Ferruginea; scutum flavo univitatum et bimaculatum; pedes picei, femoribus ferrugineis; alæ anticæ fuscæ, maculis luridis ornatæ; alæ posticæ luridæ.

Ferruginous: head minutely punctured, impressed above: chest flat, transversely striated, somewhat pitchy on the disk; shield with a short yellow stripe between the disk and the hind border, which has a yellow spot on each side: legs pitchy; thighs ferruginous: fore-wings dark brown, with several large oblong lurid spots: hind-wings lurid. Length of the body 5 lines; of the wings 11 lines.

a. Columbia. From Mr. Turner's collection.

#### 6 4. Scaris obliqua.



Picea; caput ferrugineum; scutellum flavo univittatum et bimaculatum; metathorax ferrugineus; pedes rufi; alæ anticæ nigro fuscæ, fulvo guttatæ, fulvo basi apiceque maculatæ; alæ posticæ fuscæ.

Pitchy: head dark ferruginous; face shining, flat, and very finely shagreened on the disk, convex, and with slight oblique strize on each side; crown much impressed: chest transversely striated; scutcheon with a yellow stripe in the disk, and a yellow spot on each side of the hind border: hind-chest ferruginous: legs dark red; feet pitchy towards the tips; fore-wings dark brown, adorned with numerous tawny dots, with two tawny spots at the base, and with several confluent tawny marks at the tips: hind-wings brown, paler at the base. Length of the body 5 lines; of the wings 9 lines.

a. Columbia. From Mr. Turner's collection.

#### Genus 5. ZINNECA.

Zinneca, Amyot et Serv. Hist. Nat. Hém. 579.

#### O1. ZINNECA FLAVIDORSUM.

Zinneca flavidorsum, Amyot et Serv. Hist. Nat. Hém. 579, 1, pl. 11, f. 2.

N. America.

## Genus 6. GYPONA.

Gypona, Germ. Mag. iv. 73. Burm., Blanch., Amyot et Serv. Cercopis, p., Fabr.

#### Group 1. Burm. Gen. Cic. Cicadel. Gypona.

### 1. GYPONA GLAUCA.

Gypona glauca, Germ. Mag. iv. 74, 1, pl. 1, f. 6. Burm. Handb. Ent. ii. 1, 114, 1. Gen. Cic. Cicadel. Gypona. 1. Blanch. Hist. Nat. Ins. iii. 195, 1. Amyot et Serv. Hist. Nat. Hém. 580, 1.

Cercopis glauca, Fabr. Syst. Rhyn. 91, 16.

*a*—*c*.——?

#### 2. GYPONA THORACICA.

Cercopis thoracica, Fabr. Syst. Rhyn. 91, 15. Burm. Gen. Gyp. 2.

Brazil.

## 3. Gypona equestris.

Cercopis equestris, Fabr. Syst. Rhyn. 92, 17. Burm. Gen. Gyp. 3. S. America.

#### 4. GYPONA PALLENS.

Gypona pallens, Germ. Burm. Gen. Gyp. 4.
Brazil.

5. Gypona histrio.

Gypona histrio, Burm. Gen. Gyp. 5.
Brazil.

6. GYPONA AURULENTA.

Gypona aurulenta, Burm. Gen. Gyp. 6. Cercopis aurulenta, Fabr. Syst. Rhyn. 92, 18. Brazil.

7. GYPONA CHALCOPTERA.

Gypona chalcoptera, Burm. Gen. Gyp. 7. Brazil.

## VO 8. GYPONA SMARAGDULA.

Viridis; scutum flavo varium; scutellum luteum; abdomen smaragdinum, fusco bivittatum; alæ anticæ luridæ, costæ virides, apice nigro maculatæ; alæ posticæ sublimpidæ fusco marginatæ.

Grass-green, paler beneath: head flat, short-conical, narrower than the chest, striated longitudinally, black along the fore border, very slightly concave along the hind border; its length rather less than half its breadth; underside testaceous towards the fore-border; striæ on each side of the face hardly visible: chest slightly convex, transversely striated: shield yellow in front and on each side; scutcheon mostly luteous, with a very slight transverse suture near the tip: breast testaceous on each side in front: abdomen above bright emerald green, with two reddish brown stripes, which are united at the tip, beneath with an indistinct testaceous stripe along each side: legs very pale green; feet and fore-shanks tawny: forewings lurid, narrow, rather pointed, green along two-thirds of the fore border from the base, with an oblong black spot on each tip, near which the hind border is brown: hind-wings almost colourless, brown at the tips and along the hind borders. Length of the body 7 lines; of the wings 14 lines.

a. Parà. From Mr. Stevens' collection.

## √ 0 9. GYPONA VIRIDIRUFA.

Flavo-viridis; abdomen rufo bivittatum; pedes virides, tarsis fulvis; alæ anticæ virides, limpido maculatæ, basi postico ferrugineæ, apice fuscæ et luridæ; alæ posticæ sublimpidæ, fusco marginatæ.

Grass-green, tinged with yellow, paler beneath: head flat, semicircular, narrower than the chest, striated longitudinally, ferruginous along the fore border, slightly concave along the hind border; its length much less than half its breadth; underside tinged with yellow; some dark oblique streaks on each side of the face: chest slightly convex, transversely striated; scutcheon with an arched suture near the tip, which is luteous: abdomen with two bright red stripes, which are darker towards the tip, where they are united: legs pale green; feet tawny; hind-feet green at the base: forewings green in front with a colourless interval near the tips, which are brown; hind part ferruginous at the base, colourless in the middle, lurid at the tips: hind-wings almost colourless, brown at the tips and along the hind borders. Length of the body 6 lines; of the wings 11 lines.

a. Parà. From Mr. Stevens' collection.

### V 0 10. Gypona signifera.

Testaceæ; caput subtus viridescens; abdominis dorsum rufo fasciatum; alæ anticæ disco et apice piceo notatæ; alæ posticæ sublimpidæ.

Testaceous, shining, paler beneath: head flat, semicircular, a little narrower than the chest, striated longitudinally in the middle, and obliquely on each side, ferruginous along the fore border; concave along the hind border; its length less than half its breadth: underside tinged with pale green; disk of the face slightly concave in front: feelers pitchy, first and second joints yellow; third and fourth tawny at the base: chest almost flat, transversely striated: scutcheon with a slightly arched transverse suture near the tip: abdomen above with a pale red band on the hind border of each segment: oviduct ferruginous, partly pitchy: legs pale testaceous; claws black, yellow at the base: fore-wings with a few pitchy marks, which are chiefly on the cross-veins, in the disks, and on the intermediate parts of the longitudinal veins, and on some of the latter towards the tips: hind-wings almost colourless, bright red at the

base, slightly tinged with brown about the hind borders near the base: veins black, tawny at the base. Length of the body 5 lines; of the wings 10 lines.

a. Venezuela. From Mr. Dyson's collection.

## 11. GYPONA QUADRIMACULA.

Fulva, subtus testacea; caput nigro vittatum; thorax nigro maculatus; alæ anticæ cupreo-piceæ, maculis unâ flavâ duabusque limpidis ornatæ; alæ posticæ sublimpidæ, apice fuscæ.

Tawny, testaceous beneath: head flat, semicircular, concave behind, a little narrower than the chest, striated longitudinally in the middle, and obliquely on each side, black along the borders, and with two black stripes between the eyelets; its length less than half its breadth: chest almost flat, transversely striated; shield bordered with black on each side and behind, and with two black spots in front, one of them on the fore border, the other towards the disk; scutcheon with two black spots on the fore border: abdominal segments red beneath along the hind borders, and with a red triangular spot on each side: tips of the feet and of the hind-shanks black: fore-wings pitchy, slightly coppery, with a large, pale yellow spot on the base of the fore border; a colourless spot near the tip of the fore border, and another on the middle of the hind border: hind-wings almost colourless, with brown tips. Length of the body  $4\frac{1}{2}$  lines; of the wings  $9\frac{1}{2}$  lines.

Var. \( \beta \). Crown black along each side, and with one black stripe between the eyelets: shield with deep black borders, which enclose some tawny spots on each side; one black spot in the disk, none on the fore border; disk of the scutcheon black: abdomen wholly yellow beneath: tips of the hind-shanks testaceous: fore-wings mostly

lurid.

a. Parà. Presented by Reginald Graham, Esq. b. ——?

## 12. Gypona reticulata.

Testacea, nigro varia; abdominis dorsum nigrum; pedes nigro varii, tibiis anticis nigris; alæ anticæ flavæ, disco piceo maculatæ; alæ posticæ fuscæ.

Testaceous, slightly convex: head very short-conical, concave behind, narrower than the chest; crown striated obliquely on each side, with a black stripe, and on each side with three black spots, two on the hind-border, and one by each eyelet; underside black towards the front: face with indistinct oblique striæ on each side, black towards the tip; epistoma mostly black: shield with about fourteen black spots of various size; scutcheon with a large triangular black spot on each side of the fore border, with two small black spots in the disk, and with a short black stripe on each side near the tip: abdomen black above: anterior thighs marked with black; fore-shanks black; middle-shanks black above: fore-wings yellow, with some small pitchy spots in the disk; veins pitchy: hindwings brown. Length of the body  $6\frac{1}{2}$  lines; of the wings 12 lines.

a. Bahia. Presented by J. P. G. Smith, Esq.

13. Gypona marginata.

Nigra, subtus testacea; caput subtus nigrum testaceo bivittatum; scutum testaceo marginatum; pectus nigro bivittatum; abdomen ferrugineum; pedes testacei, tarsis piceis; alæ sublimpidæ.

Black, testaceous beneath: head flat, semicircular, concave behind, narrower than the chest; crown striated obliquely on each side; its length less than half its breadth; underside black, with two testaceous stripes; face with oblique ridges on each side: shield transversely striated, with testaceous borders; scutcheon punctured: breast with a black stripe on each side: abdomen ferruginous: legs testaceous; feet pitchy: wings almost colourless; fore-wings slightly and interruptedly tinged with brown along the borders and towards the tips. Length of the body 3 lines; of the wings 7 lines.

a. ——?

#### 14. Gypona fervens.

Fulva, subtus testacea; pedes testacei; alæ anticæ luteæ, apice subfuscæ piceo maculatæ.

Tawny, pale testaceous beneath: head flat, almost semicircular in front, slightly concave behind, narrower than the chest; its length about one-third of its breadth; face flat: shield transversely striated, impressed on each side in front: legs pale testaceous: fore-wings pale luteous, with a pitchy spot near the tips, which are transparent, and slightly tinged with pale brown. Length of the body 3 (?) lines; of the wings 7 lines.

a. Venezuela. From Mr. Dyson's collection.

Group 2. Sub-group 1. Burm. Gen. Gyp. 8.

15. Gypona prasina.

Gypona prasina, Burm. Gen. Gyp. Brazil.

16. GYPONA STRIATA.

Gipona striata, Burm. Gen. Gyp. 11, 9. Pennsylvania.

Sub-group 2. Burm. Gen. Gyp.

VC17. GYPONA CANA.

∨ Gypona cana, Burm. Gen. Gyp. 10.

a. North America. Presented by the Entomological Club.
b—d. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.
e—g. Nova Scotia.

18. GYPONA LINEATA.

Gypona lineata, Burm. Gen. Gyp. fig. 1. Brazil.

## VOVAR. ?

Testacea, luteo vittata, subtus albida; alæ anticæ albidæ, venis viridibus; alæ posticæ albæ.

Testaceous, whitish beneath: head flat, almost smooth, semicircular, a little narrower than the chest, not arched nor ridged, with indistinct, pale luteous stripes, very slightly concave along the hind border: its length much less than half its breadth; face slightly concave in front: shield green, slightly convex, finely transversely striated, with eight pale luteous stripes; scutcheon flat, with indistinct luteous stripes, green at the tip, with an arched

transverse suture: legs pale testaceous: fore-wings whitish; veins green: hind-wings white. Length of the body  $2\frac{3}{4}$  lines; of the wings 7 lines.

a. ---? Presented by J. G. Children, Esq.

Genus 7. XEROPHLŒA.

Xerophlæa, Germ. Zeitschr. i. 190.

1. XEROPHLÆA GRISEA.

Xerophlæa grisea, Germ. Zeitschr. i. 190, 1. Brazil.

## Genus 8. PENTHIMIA.

Penthimia, Germ. Mag. iv. 46. Burm., Blanch., Amyot et Serv. Hist. Nat Hém. 580.

Cercopis, p., Fabr., Coqueb., Panz.

Cicada, p., Panz., Rossi.

## 1. PENTHIMIA ATRA.

Penthimia atra, Germ. Mag. Ent. iv. 48, 1. Burm. Handb. Ent. ii. 1, 115, 1. Blanch. Hist. Nat. Ins. 174. Amyot et Serv. Hist. Nat. Hém. 581. Crochard, Ed. Règ. Anim. Ins. pl. 99, f. 4. Cercopis sanguinicollis, Fabr. Syst. Rhyn. 94, 29.

Cercopis hæmorrhoa, Fabr. Syst. Rhyn. 93, 28. Schrank.

Cercopis atra, Fabr. Syst. Rhyn. 93, 97. Coqueb. Illustr. 34, pl. 8, f. 9.

Cicada nigra, Rossi.

Cicada thoracica, Panz. Faun. Fasc. 61, pl. 18.

Cicada hœmorrhoa, Panz. Fann. Fasc. 61, pl. 16.

Cicada æthiops, Panz. Faun. Fasc. 33, pl. 13, 61, 17?
Penthimia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 199, 435.

a. Europe. Presented by M. Percheron. b-f. Europe. Presented by M. Goureau.

q—i. South France.

## 2. PENTHIMIA VICARIA.

Nigra, vel ferruginea; alæ anticæ maculatæ.

Black, shining: head and chest convex, minutely striated: scutcheon with a reddish ferruginous dot on each side and one at the tip: fore-wings covered with ferruginous dots; their tips and the hind-wings gray. Length of the body  $2-2\frac{1}{2}$  lines; of the wings 4-5 lines.

Var.  $\beta$ . Ferruginous: legs black: fore-wings pitchy, with lurid marks; tips lurid: hind-wings almost colourless.

Var. γ like var. β: legs and fore-wings ferruginous; the latter mottled with brown.

a-c. St. John's Bluff, E. Florida. Presented by E. Doubleday Esq.

## ✓ 3. Penthimia orientalis.

Atra; abdomen apice pedesque anteriores nonnunquam rufo varia; alæ posticæ fuscæ.

Deep black, oval: head and chest convex, thinly punctured: hind border of the breast red: fore-wings thickly punctured; their tips and the hind-wings brown. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

 $\bigcirc$  Var.  $\beta$ . Abdomen red on each side towards the tip: anterior shanks and feet mostly red.

a. North India. From Mr. Warwick's collection. b, c. ——?

## 4. Penthimia fulviventris.

Picea, sat longa; abdomen subtus fulvum; tarsi postici fulri; alæ anticæ apice fuscæ limpido fasciatæ.

Pitchy, rather long, almost elliptical: head and chest convex, thickly and minutely punctured, with an indistinct longitudinal ridge: chest slightly impressed on each side: hind border of the breast tawny: abdomen beneath tawny, with a pitchy tip: hind-feet

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Hyllia

tawny, with black tips: fore-wings minutely rugulose; a curved colourless band near each tip, which is brown: hind-wings gray. Length of the body  $5\frac{1}{2}$  lines; of the wings 10 lines.

a. —— ?

## 5. PENTHIMIA COMPACTA.

Ferruginea; caput nigrum; thorax anticè niger; alæ anticæ piceæ, ad margines posticos ferrugineæ; alæ posticæ sublimpidæ.

Ferruginous, short, broad: head black, very short, nearly as broad as the chest, slightly concave behind, rather more convex in front; face convex, with distinct cross ridges, which are not oblique: chest convex, minutely punctured, black towards the fore border: fore-wings pitchy, ferruginous along the hind border: hind-wings almost colourless. Length of the body  $1\frac{1}{2}$  line; of the wings 3 lines.

a. North India. From Mr. Warwick's collection.



## Genus 9. CLASTOPTERA.

Clastoptera, Germ. Zeitschrift, i. 187.

#### 1. CLASTOPTERA ACHATINA.

Clastoptera achatina, Germ. Zeitschr. i. 187, 1. Pennsylvania.

#### D 2. CLASTOPTERA DARNOIDES.

Clastoptera darnoïdes, Germ. Zeitschr. i. 188, 2. Brazil.

#### 3. CLASTOPTERA CIMICOIDES.

Clastoptera cimicoides, Germ. Zeitschr. i. 188, 3. Brazil.

### 4. CLASTOPTERA FLAVIFRONS.

Clastoptera flavifrons, Germ. Zeitschr. i. 189, 4. Brazil.

### 5. CLASTOPTERA XANTHOCEPHALA.

Clastoptera xanthocephala, Germ. Zeitschr. i. 189, 5. Pennsylvania, Carolina.

#### 6. CLASTOPTERA NIGRA.

Clastoptera nigra, Germ. Zeitschr. i. 189, 6. Brazil.

## 7. CLASTOPTERA SCUTELLATA.

Clastoptera scutellata, Germ. Zeitschr. i. 189, 7, Brazil.

#### Group 3. IASSIDES.

Iassides, Amyot et Serv. Hist. Nat. Hém. 581. Tettigonidæ, p., Curtis.

### Genus 1. EUPELIX.

Eupelix, Germ. Mag. Ent. iv. 94. Ahrens, Burm., Herr.-Schæff., Amyot et Serv., Blanch. Ocicada, p., Fabr., Gmel., Fall.

#### O 1. EUPELIX CUSPIDATA.

Eupelix cuspidata, Germ. Mag. iv. 94, 1. Ahrens, Faun. Ins. Europ. iv. pl. 22. Burm. Handb. Ent. ii. 1, 112, 10, 1. Gen. Eupelix, 1. Blanch. Hist. Nat. Ins. 196. Amyot et Serv. Hist. Nat. Hém. 582. Herr.-Schæff. Nom. Ent. 72, 76, 116.

Cicada cuspidata, Fabr. Syst. Rhyn. 79, 86. Sp. Ins. ii. 328, 43.

Mant. Ins. ii. 273, 58. Ent. Syst. iv. 46, 86. Gmel. Ed. Syst.

Nat. i. 4, 2115, 177. Stew. Elem. Nat. Hist. ii. 98. Turt.

Syst. Nat. ii. 598. Fall. Act. Holm. xxvii. 1806, 8, 1. Hem.

Suec. Cic. 22, 1.

Eupelix, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 201, 437.

a. England. Presented by F. Walker, Esq.

#### O 2. EUPELIX PRODUCTA.

Eupelix producta, Germ. Burm. Gen. Eupelix, 2, f. 1, 5. Germany.

#### O 3. Eupelix spathulata.

Eupelix spathulata, Germ. Burm. Gen. Eupelix, 3, f. 6. Germany.

### Genus 2. MEGOPHTHALMUS.

Megophthalmus, Curt. Ent. Mag. i. 193. Cicada, p., Fallen.
Paropia, Hardy.

### 1. Megophthalmus scanicus.

Cicada scanica, Fall. Act. Holm. xxvii. 1806, 113, 51. Hem. Suec. Cic. 65, 1.

Megophthalmus bipunctatus, Curt. Ent. Mag. i. 194, 1.

a—g. England. h. Sweden.

## 2. MEGOPHTHALMUS PALLIDIPENNIS.

Megophthalmus pallidipennis, Curtis, MSS.

Paropia pallidipennis, Hurdy, Proc. Tyne. Nat. Field Club. i. 430, 1.

a. Scotland. Presented by E. Doubleday, Esq.

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## Genus 3. PAROPIA.

Paropia, Germ. Burm. Handb. Ent. ii. 1, 113, 11. Herr.-Schaff. O Cicada, p., Fall.

Cœlidia, p., Germ. Mag. Ent. iv. 79.

## A. PAROPIA SCUTATA.

Ccelidia scutata, Germ. Mag. Ent. iv. 79, 5. Ahrens, Faun. Eur.

Paropia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 202, 438.

Paropia scutata, Burm. Handb. Ent. ii. 1, 113, 1.

Gen. Paropia, 1. Herr.-Schaff. Faun. 126.

## 6 2. PAROPIA GUTTIFERA.

Brevis, crassa, fusca; caput anticè albido trivittatum; scutum albido interrupte fasciatum; tibiæ posticæ sexspinosæ; alæ anticæ binotatæ; alæ posticæ subcinereæ.

Short, thick, very dark brown: head and chest slightly shining, thinly and minutely punctured: head a little broader than the chest, with a slender yellow band along the hind border, and with a broader whitish stripe on each side in front; a short whitish streak on the face: distance between the eyelets equal to one-third of the breadth of the head: a short whitish band on each side of the hind border of the shield: hind-shanks beset with six spines, a character peculiar to this species: fore-wings brown, with a black fore border; a colourless spot near the tip of the fore border, and a colourless streak extending obliquely from the base to the hind border; four apical areolets: hind-wings slightly gray. Length of the body 1 line; of the wings  $2\frac{1}{2}$  lines. Marelle . . .

a. ——? Presented by C. D. E. Fortnum, Esq.

## 6 3. PAROPIA TRIANGULUM.

Flava, nitens, transversè striata; caput fusco fasciatum; scutum fuscum, flavo biguttatum; scutellum fusco trimaculatum; alæ anticæ subfulvæ; alæ posticæ limpidæ.

Yellow, shining: head and chest transversely striated: head with a broad brown band between the eyes: distance between the eyelets more than one-third of the breadth of the head: shield brown, with a yellow dot on each side of the fore border; fore border of the scutcheon with a brown triangular spot in the middle, and with a brown dot on each side: hind-shanks closely beset with stout spines: fore-wings slightly tawny; veins indistinct; areolets few: hind-wings colourless. Length of the body 1½ line; of the wings 3 lines.

a. Rio Janeiro. From Mr. Shuckard's collection.

#### Genus 4. ACOCEPHALUS.

- 6 Acocephalus, Germ. Burm. Handb. Ent. ii. 1, 111, 9. Amyot et Serv. Herr.-Schæff.
  - Cercopis, p., Fabr.
- O Cicada, p., Fall., Panz.
- Iassus, p., Germ.
- Acucephalus, Aphrodes, p. et Phrynomorphus, Curtis.
- Pholetæra, Zetterstedt. Acucephalus, Hardy.

# 1. Acocephalus olivaceus.

Olivaceo-viridis, subfusiformis, subtus testaceus; pedes testacei; alæ posticæ sublimpidæ.

Olive-green, almost spindle-shaped, testaceous beneath: head short, thickly punctured, almost semicircular along the fore border, which forms a slight rim, concave behind, a little narrower than the chest; its length hardly one-third of its breadth; face flat, with very short and slightly oblique ridges on each side: shield finely striated across, minutely punctured towards the fore border; scutcheon minutely punctured, with a slightly arched suture, between which and the tip it is transversely striated: legs testaceous: fore-wings punctured towards the base and along most of the fore border: hindwings almost colourless. Length of the body 5 lines; of the wings 11 lines.

a. Philippine Islands. From Mr. Cuming's collection.

## 2. Acocephalus stramineus.

Testaceus; caput anticè nigro biguttatum; alæ anticæ sublimpidæ; alæ posticæ limpidæ.

Pale testaceous: head slightly rugulose, a little narrower than the chest, convex, and almost semicircular in front, less concave behind; its length about one-fourth of its breadth; crown longer in the middle than on each side; two black dots on the fore border, which forms a slight rim; face flat, broad, punctured: shield transversely striated; scutcheon very slightly punctured: fore-wings almost colourless, punctured nearly to the tips, pale testaceous towards the base: hind-wings colourless. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a. Java. From Mr. Argent's collection.

#### 3. Acocephalus ——?

a. (Mutilated). Kangaroo Island. Presented by the Entomological Club.

#### O 4. Acocephalus Solidaginis.

Tettigonia Solidaginis, Harris, MSS.

Stramineus, ferrugineo confertim notatus; pedes piceo fasciati; alæ posticæ sublimpidæ apice cinereæ.

Straw-colour, thickly covered with ferruginous marks: head transversely semi-elliptical in front; its length hardly more in the middle than on each side, and not more than one-fourth of its breadth; legs with irregular pitchy bands: hind-wings almost colourless, with gray tips. Length of the body  $3\frac{1}{2}$  lines; of the wings 6 lines.

a. United States. Presented by the Entomological Club.

5. ACOCEPHALUS PELTASTES.

Eupelix peltastes, Burm. Handb. Ent. ii. 1, 112. South Africa.

6. Acocephalus Bimaculatus.

Acocephalus bimaculatus, Amyot et Serv. Hist. Nat. Hém. 582, 1.

## 7. Acocephalus costatus.

Acocephalus costatus, Burm. Handb. Ent. ii. 1, 112, 1.

✓ Iassus costatus, Germ. Mag. Ent. iv. 93, 36.

⊘ Cicada costata, Panz. Faun. Germ. lxi. 14.

Acocephalus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 204, 441.

a. ——?

### 8. Acocephalus Cardui.

Acocephalus Cardui, Curt. Brit. Ent. 620, 1. Var. A. obscurus, Curt. Brit. Ent. 620, 2. Var. A. sparsus, Curt. Brit. Ent. 620, 3. Cicada, &c., Stoll, Cic. 80, pl. 20, f. 110.

a—e. England. f. France.

## 9. Acocephalus striatus.

Gieada rustica, Fabr. Sp. Ins. ii. 330, 10. Mant. Ins. ii. 275, 15. Gmel. Ed. Syst. Nat. i. 4, 2102, 106. Fall. Act. Holm. xxvii. 1806, 82. Hem. Suec. Cic. 23, 1. Zett. Faun. Lapp. i. 518, a.

Cicada variegata, Fabr. Sp. Ins. ii. 327, 36. Mant. Ins. ii. 272, 49.

Gmel. Ed. Syst. Nat. i. 4, 2105, 121.

Cicada striata? Linn. Faun. Suec. 887. Raii Ins. 68, 1. Geoff.
Ins. Par. i. 424, 20. Gmel. Ed. Syst. Nat. i. 4, 2103, 30.
Berk. Syn. i. 113. Stew. El. Nat. Hist. ii. 98? Turt. ii.
586.

Cercopis striata, Fabr. Ent. Syst. iv. 52, 23. Syst. Rhyn. 96, 40.

Cercopis variegata, Fabr. Ent. Syst. iv. 55, 37.

Cercopis rustica, Fabr. Ent. Syst. iv. 54, 33. Syst. Rhyn. 97, 51. Var.? Cercopis striatella, Fabr. Ent. Syst. iv. 56, 43. Syst. Rhyn. 98, 59.

Cicada nervosa? Schrank, Faun. Boic. 252.

Iassus strigatus, Germ. Mag. Ent. iv. 92, 33.

Acocephalus striatus, Burm. Handb. Ent. ii. 1, 112, 2.

Acocephalus rugosus, Curt. Brit. Ent. 620, 4. Pholetæra rustica, Zett. Ins. Lapp. 288, 1.

Diatæniops, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 205, 442.

a. England.

b. France.

c. South of France.

# 10. Acocephalus livens.

O Pholetæra livens, Zett. Ins. Lapp. 288, 2.
O Var.? Pholetæra nigro-punctata, Zett. Ins. Lapp. 288, 3.
Lapland.

## 11. ACOCEPHALUS UNICOLOR.

#### 12. ACOCEPHALUS FASCIATUS.

Acucephalus fasciatus, Curt. Brit. Ent. 620, 6. England.

## 13. Acocephalus pallidus.

Acucephalus pallidus, Curt. Brit. Ent. 620, 7. England.

## 14. Acocephalus bicinctus.

Acucephalus bicinctus, Curt. Brit. Ent. 620, 8.
 England.

### ()15. ACOCEPHALUS ADUSTUS.

- Acucephalus adustus, Hardy, Proc. Tyne. Nat. Field-Club. i. 429, 1.
  - a. Scotland. Presented by J. Hardy, Esq.b. Scotland. Presented by E. Doubleday, Esq.

### ()16. Acocephalus albifrons.

Cicada albifrons, Linn. Faun. Suec. 884. Cicada subrustica? Fall. Act. Holm. xxvii. 1806, 10, 3.

#### C'17. ACOCEPHALUS BIFASCIATUS.

Cicada bifasciata, Linn. Syst. Nat. ii. 706, 10. Faun. Suec. 898. Fall. Act. Holm. xxvii. 1806, 12, 4. Hem. Suec. Cic. 1829, 26, 3. Don. Brit. Ins. xi. 75, pl. 387. Zett. Faun. Lapp. i. 519, 3.

Cicada trifasciata, De Geer, Ins. iii. 186, 6, pl. 11, f. 25.

Cercopis trifasciata, Fabr. Ent. Syst. iv. 56, 42. Syst. Rhyn. 98, 58. Coqueb. Illust. 34, pl. 8, f. 10.

Iassus trifasciatus, Germ. Mag. Ent. iv. 87, 21.

Acucephalus bifasciatus, Curt. Brit. Ent. 620, 9. Herr.-Schæff. Nom. Ent. 72. Faun. exxv. 1, 153, 4.

Diadesmia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 220, 477.

Pholetæra bifasciata, Zett. Ins. Lapp. 289, 5.

Cicada tristriata? Geoffr. Ins. Par. iii. 425, 21. Gmel. Ed. Syst. Nat. i. 4, 2116, 192.

Cicada bistriata? Geoffr. Ins. Par. iii. 425, 22. Gmel. Ed. Syst.

Nat. i. 4. 2116, 193.

Acucephalus tricinctus, Curt. Brit. Ent. 620, 11. Penthotænia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 206, 445.

a. b. England.

c. d. Scotland. Presented by E. Doubleday, Esq.

e. Italy. From Dr. Leach's collection.

#### 718. Acocephalus affinis.

Cicada affinis, Fall. Act. Holm. xxvii. 1806, 13, 5. Sweden.

### 19. Acocephalus spurius.

Cicada bifasciata, Var. spuria, Fall. Act. Holm. xxvii. 1806, 13. Cicada spuria, Zett. Faun. Lapp. i. 519, 2. Pholetæra spuria, Zett. Ins. Lapp. 288, 4.

Sweden.

#### 20. Acocephalus Argostagum.

OArgostagum, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 204, 440. France.

Pipon de

# O<sub>21</sub>. Acocephalus nitidus.

Phrynomorphus nitidus, Curt. Ent. Mag. i. 194. a—f. England. Presented by F. Walker, Esq.

## 22. Acocephalus sparsus.

Flavus, fusco guttatus; pectus, abdomen et pedes flava; alæ anticæ albidæ, fusco guttatæ; alæ posticæ albæ.

Yellow, thinly covered with very minute brown dots: head short, almost as broad as the chest; crown flat, semicircular in front, slightly concave along the hind border; its length about one fourth of its breadth; face flat: breast, abdomen and legs pale yellow: fore-wings whitish, dotted with brown: hind-wings white. Length of the body  $2\frac{3}{4}$  lines; of the wings 6 lines.

a. British Guiana. Presented by Sir R. Schomburgek.

## 23. Acocephalus obliquus.

Flavus, fusco varius; pedes flavi; pedes postici fusco-flavi; alæ anticæ subfulvæ, fusco variæ; alæ posticæ limpidæ.

Yellow, mottled with brown: head flat, short-conical, very concave on the hind border, almost as broad as the chest, slightly impressed on the disk, with a slender, indistinct longitudinal furrow; its length not more than one-fourth of its breadth; face flat: shield slightly convex: scutcheon flat, yellow, with a slightly arched transverse suture in the middle: legs yellow; hind-legs partly brown: fore-wings slightly tawny, varied with brown: hind-wings colourless. Length of the body  $1\frac{1}{2}$  line; of the wings 3 lines.

a. St. James Isle, Galapagos. Presented by C. Darwin, Esq.

## 24. Acocephalus —— ? (Pupa).

<sup>1</sup>a. Cape. From M. Dregé's collection.

#### © Genus 5. SELENOCEPHALUS.

Selenocephalus, Germar, Handb. Ent. ii. 1, 111. Burm. Amyot et Serv. Hist. Nat. Hém. 583.

#### 1. SELENOCEPHALUS OBSOLETUS.

Iassus obsoletus, Germ. Reise nach Dalm. 23, 1, 469. Mag. Ent. iv. 93, 35. Burm. Handb. Ent. ii. 1, 111, 1. Amyot et Serv. Hist. Nat. Hém. 583.
Selenocephalus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 206, 446. Europe.

#### O 2. SELENOCEPHALUS AGRESTIS.

Cicada agrestis, Fall. Act. Holm. xxvii. 1806, 23, 17. Hem. Suec. Cic. 18. Panz. Faun. Ins. cxxiv. 12.

Europe.

## O Genus 6. CŒLIDIA.

Cœlidia, Germ. Mag. Ent. iv. 75.

## 1. CŒLIDIA VENOSA.

Cœlidia venosa, Germ. Mag. Ent. iv. 76, 1, pl. 1, f. 5. Burm. Handb. Ent. ii. 1, 114, 1.

Brazil.

### 2. CŒLIDIA PŒCILA.

Cœlidia pœcila, Germ. Mag. Ent. iv. 77, 2. Bahia.

#### 0 3. CŒLIDIA VARIEGATA.

Cœlidia variegata, Germ. Mag. Ent. iv. 77, 3. Brazil.

## 4. CŒLIDIA PRUINOSA.

Cœlidia pruinosa, Germ. Mag. Ent. iv. 78, 4 Brazil.

## 05. CŒLIDIA ATRA.

Atra; caput flavum; pedes anteriores flavi; alæ anticæ nigrocyaneæ, apice latæ luridæ; venæ fulvo fasciatæ; alæ posticæ fuscæ.

Deep black: head small, yellow, much narrower than the chest; crown flat, subquadrate, yellow along the fore border; its length almost equal to its breadth; face long, almost elliptical; disk flat, finely shagreened; ridges on each side very slight; epistoma conical, convex: chest very minutely tuberculate; shield convex in front, almost straight along the hind border: scutcheon with a shallow transverse impression: some of the pectoral segments with testaceous borders: valves of the oviduct terminated by two filaments: anterior legs yellow: fore-wings bluish-black, very broad towards their tips, which are lurid; veins black, with numerous tawny bands: hind-wings brown. Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

a. Columbia. From M. Jurgens' collection.

# 6. Cœlidia rufipennis.

Testacea, subtus albida; facie rufo-trivittata; abdomen apice rufum; pedes pallide testacei; tibiis tarsisque posticis rufis; alæ rufæ; alæ anticæ apice latæ, ad costam nigro maculatæ.

Testaceous, whitish beneath: head a little narrower than the chest; crown whitish, longer than broad, widening towards the front, bordered by a rim, and divided by a longitudinal ridge; two oblique transverse ridges forming an angle just behind the eyelets: face long, flat, with a slight longitudinal ridge, forming an angle on each side by the feeler, adorned with three pale red stripes, the side pair short: epistoma rather long, indistinctly ridged: chest punctured; shield red; scutcheon with a straight transverse suture towards the tip: abdomen red towards the tip: legs pale testaceous; hind-shanks and hind-feet red: wings red: fore-wings broad, widening towards the tips, with some blackish marks along the fore-

border; veins red, marked here and there with black: hind-wings with brownish borders. Length of the body 3 lines; of the wings 7 lines.

a. Parà. From Mr. Stevens' collection.

#### 67. CŒLIDIA COSTALIS.

Ferruginea, capite pectore ventre pedibusque testaceis; alæ anticæ testaceæ, maculis duabus limpidis ornatæ, fusco vittatæ, ad costam ferrugineæ nigro maculatæ; venæ albo fasciatæ; alæ posticæ fuscæ, testaceo marginatæ.

Pale ferruginous: head whitish, a little narrower than the chest, in structure like that of *C. rufipennis*; crown with a pale ferruginous band across the middle; face ferruginous, whitish towards the epistoma; epistoma whitish, ferruginous towards the mouth, which is also ferruginous: chest punctured; scutcheon with a straight transverse suture; breast and abdomen, beneath, and legs testaceous; thighs paler than the shanks: fore-wings testaceous, ferruginous with some black spots along the fore border, brown from part of the disk, to the tips towards the hind border, with two colourless spots, one in the disk, the other near the tip of the hind border; veins pale or brown, with whitish bands: hind-wings brown, pale testaceous along four-fifths of the fore border, and along more than half of the hind border. Length of the body 3 lines; of the wings 7 lines.

a. ——?

#### 08. CŒLIDIA RUFIFRONS.

Nigra; caput flavo-bivittatum, antice rufum; abdomen subtus apice ferrugineum; pedes flavi; pedes postici fusco varii; alæ anticæ viridi piceæ, fulvo guttatæ; alæ posticæ fuscæ.

Black: head small, much narrower than the chest; crown very much longer than broad, almost spindle-shaped, having on each side a yellow stripe, which is forked and much contorted on the front, and is continued along each side of the face; face red, spindle-shaped, with a black stripe in the disk, and with black oblique bands on each side; compartments on each side yellow with black marks; epistoma red, black along each side: mouth yellow: chest shining, slightly punctured: pectoral segments with yellow borders: abdomen ferruginous towards the tip beneath; hind borders of the segments pale yellow: legs dingy yellow; hind-legs partly brown:

wings with a glaucous tinge beneath: fore-wings pitchy, tinged with green, adorned with numerous tawny dots, and with a tawny streak on each border towards the tip: hind-wings brown. Length of the body  $2\frac{3}{4}$  lines; of the wings 6 lines.

a. Honduras. From Mr. Dyson's collection.

## 9. Cœlidia Eburata.

Fusca, albo varia; abdomen testaceum, subtus piceum albo notatum; pedes testacei albo strigati, tarsis nigris, femoribus tibiisque anticis nigris latis, his albo maculatis, illis albo bifasciatis; alæ posticæ cinereæ.

Fem. Brown: head a little narrower than the chest; crown ivory-white, with darker streaks, and with a black spot on each side towards the front, its length about twice its breadth; front black with a few white dots; face black, narrow, thinly punctured, tawny on each side, with two white spots at the base: chest partly tawny, thickly covered with white tubercles; scutcheon with a white longitudinal ridge: pectoral segments with white borders: abdomen testaceous, pitchy with white marks beneath: oviduct black: legs testaceous, slightly streaked with white; feet black; fore-thighs and fore-shanks black, widened, the former with two white bands, the latter with a white spot on each side: fore-wings brown, almost colourless at the base, near which there is a narrow irregular white band; a white spot on the fore border at two-thirds of the length: a white streak opposite to it in the disk, and another extending for a short space along the hind border from the tip; veins thickly covered with white dots: hind-wings gray. Length of the body 31 lines; of the wings  $7\frac{1}{2}$  lines.

a. Brazil. From Mr. Stevens' collection.

### D 10. CŒLIDIA INDICA.

Nigra; caput flavum, rufo bivittatum, nigro bifasciatum; abdominis segmenta flavo fasciata et subtus maculata; pedes flavi; alæ anticæ nigricantes, viridi variæ, maculis apiceque limpidis; alæ posticæ fuscæ.

Black: head pale yellow, a little narrower than the chest; crown longer than broad, widening from the hind border to the front, with a slender blackish stripe, which has a brown mark on

each side; face long, spindle-shaped, adorned with two red stripes, which are traversed by black bands, and are bordered with black on the outer side between the feelers and the epistoma: the latter is pitchy on each side at the base: mouth ferruginous, black at the base: chest minutely punctured, covered with yellow tubercles: borders of the pectoral segments tawny: segments of the abdomen with yellow hind borders; a row of yellow spots on each side beneath: legs dull yellow; tips of the hind-shauks and of the hind-feet black: fore-wings blackish, minutely mottled with dull pale green, with an almost colourless spot on each border at three-fourths of the length, and some colourless dots nearer the tips, which are also colourless: hind-wings dark brown. Length of the body 4 lines; of the wings 7 lines.

a. North India. From Mr. Warwick's collection.

## O 11. CŒLIDIA AUSTRALIS.

Nigra, nitens; facies flavo fasciata; thorax fulvo marginatus, scuti fascia scutellique apice testaceis; abdomen fulvo varium; pedes nigro vittati; alæ anticæ luridæ; alæ posticæ cinereæ.

Black, shining: head short, as broad as the chest, slightly rounded in front, more concave along the hind border, which is tawny; crown longitudinally striated; front transversely striated; face punctured, with two diverging rows of short yellow bands: chest finely striated across, with tawny borders; shield with an interrupted testaceous band along the fore border; tip of the scutcheon testaceous: abdomen partly tawny: legs tawny; thighs and shanks striped with black: fore-wings lurid: hind-wings gray. Length of the body  $2\frac{1}{4}$  lines; of the wings  $4\frac{1}{2}$  lines.

a. New Holland. Presented by the Haslar Hospital.

### O Genus 7. BYTHOSCOPUS.

Bythoscopus, Germ., Guérin, Herr.-Schæff., Blanch. DFlata, p., Fabr.

Olassus, Fabr., Fall., Germ., Blanch., Curt., St. Farg. et Serv., Zett. Cicada, p., Linn., Fabr., Gmel., Don., Schrank, Panz.

Bythoscopus (Subgenera Idiocerus, Oncopsis et Pediopsis), Burm. Bythoscopus Macropsis et Pediopsis, Amyot et Serv.

- a. Vertex desuper lunatus, cornubus rotundatis.
- b. Elytra punctis impressis magnis rugosa; areolis marginalibus apicis ultra sex.

#### O1. BYTHOSCOPUS LANIO.

- Cicada lanio, Linn. Syst. Nat. 710, 37. Faun. Suec. 892. Fuessli Ins. Helv. 24, 464. Fabr. Syst. Ent. 681, 22. Sp. Ins. ii. 326, 27. Mant. Ins. ii. 271, 38. Ent. Syst. iv. 38, 50. Gmel. Ed. Syst. Nat. i. 4, 2107, 37. Panz. Faun. Germ. iv. 23, xxxii. 10.
- Cicada brunnea, Fabr. Ent. Syst. iv. 43, 68.
- © Iassus Lanio, Fabr. Syst. Rhyn. 86, 4. Fall. Act. Holm. xxvii. 1806, 116, 1. Hem. Suec. Cic. 59, 1. Germ. Mag. Ent. iv. 81, 1. Curt. Brit. Ent. 636, 1.
- Iassus brunneus, Fab. Syst. Rhyn. 87, 10. Germ. Mag. Ent. iv. 81, 3.
  - Ocicada viridis, Don. Brit. Ins. ii. 48, pl. 54, f. 3.
- Bythoscopus lanio, Burm. Handb. Ent. ii. 1, 109, 1. Herr.-Schaff.
  Nom. Ent. 60. Blanch. Hist. Nat. Ins. 198, 4. Amyot et
  Serv. Hist. Nat. Hém. 585, 1.
- Bythoscopus lituratus, Herr.-Schaff. Faun. cxliii. 13.
   Iassus lineolatus, St. Farq. et Serv. Enc. Méth. x. 613, 2.
- Assus dorsiger, St. Farg. et Serv. Enc. Méth. x. 613, 3.
- Var. uniformis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 208.
- O Panimius, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 207, 447.

  Bythoscopus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 207, 448.
- Oncopsis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 210, 452.
  - a-g. England.
  - h. Scotland. Presented by E. Doubleday, Esq.
  - i. France.
  - b b. Elytra vix punctata, areolis apicalibus 3-5.
  - c. Venæ elytris concolores, parum conspicui.

## 0 2. BYTHOSCOPUS PRASINUS.

Cicada prasina, Fabr. Ent. Syst. iv. 38,46. Syst. Rhyn. 77, 70. Iassus prasinus, Germ. Mag. Ent. iv. 81, 2. Bythoscopus prasinus, Herr.-Schæff. Nom. Ent. 68.

Italy.

#### 3. BYTHOSCOPUS POPULI.

O Cicada Populi, Linn. Syst. Nat. ii. 709, 32. Faun. Suec. 890. Gmel. Ed. Syst. Nat. i. 4, 2103, 32.

Cicada Corvli, Linn. Syst. Nat. ii. 712, 51. Faun. Suec. 901.

Gmel. Ed. Syst. Nat. i. 4, 2115, 51.

O Cercopis Populi, Fabr. Sp. Ins. ii. 331, 14. Mant. Ins. ii. 275, 21. Ent. Syst. iv. 57, 4. Syst. Rhyn. 98, 63. Cicada biguttata, Fabr. Ent. Syst. iv. 43, 70.

Cicada fulgida, Fabr. Sp. Ins. ii. 327, 38. Mant. Ins. ii. 272, 51. Ent. Syst. iv. 44, 73. Gmel. Ed. Syst. Nat. i. 4, 2105, 123. Stew. El. Nat. Hist. ii. 98. Turt. Syst. Nat. ii. 597.

O Iassus biguttatus, Fabr. Syst. Rhyn. 87, 11. Germ. Mag. Ent. iv. 83, 9.

Olassus fulgidus, Fabr. Syst. Rhyn. 87, 13. Germ. Mag. Ent. iv. 84,

C Iassus stigma, Germ. Mag. Ent. iv. 84, 12.

Jassus margarita, St. Farg. et Serv. Enc. Meth. x. 612, 1.

1 Iassus Populi, Fall. Act. Holm. xxvii. 1806, 118, 3. Hem. Suec. Cic. 60, 3. Zett. Faun. Lapp. i. 541, 1. Ins. Lapp. 301, 1. OBythoscopus biguttatus, Burm. Handb. Ent. ii. 1, 109, 1.

Bythoscopus Populi, Herr.-Schaff. Nom. Ent. 68 Faun. cxliii. 14.

[ Idiocerus maculipennis, Curt. Brit. Ent. 733, 3. Oldiocerus sulphureus, Curt. Brit. Ent. 733, 4. O Idiocerus effulgens, Curt. Brit. Ent. 733, 5.

O Idiocerus unifasciatus, Curt. Brit. Ent. 733, 6.

O Idiocerus æneus, Curt. Brit. Ent. 733, 7.

a-f. England. q. Scotland. h, i. Sweden. j-0. ---?

## Q4. BYTHOSCOPUS GYLLENHALI.

Tassus Gyllenhali, Fall. Act. Holm. xxvii. 1806. Sweden.

#### 5. Bythoscopus nitidissimus.

Bythoscopus nitidissimus, Herr.-Schæff. Nom. Ent. 68. Germany.

## C6. BYTHOSCOPUS LEUCOSPILUS.

- ULeucospilus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 209, 450. Piedmont.
  - c c. Venæ obscuriores.
  - d. Venæ colore albo interruptæ.
  - e. Elytrorum costa iunotata.

## 7. BYTHOSCOPUS CRENATUS.

Gassus crenatus, Germ. Ahrens, Faun. Ins. xvii. 10. Bythoscopus crenatus, Herr.-Schæff. Nom. Ent. 68. Germany.

## 8. Bythoscopus scurra.

Bythoscopus scurra, Herr.-Schæff. Nom. Ent. 69. ÓIassus scurra, Germ. Ahrens, Faun. Ins. xvii. 11. Germany.

### O 9. BYTHOSCOPUS LITURATUS.

Bythoscopus lituratus, Herr.-Schæff. Nom. Ent. 69.

Iassus lituratus, Fall. Act. Holm. xxvii. 1806, 117, 2. Hem. Suec.
Cic. 60, 2. Zett. Faun. Lapp. i. 541, 2. Ins. Lapp. 302, 2.

a—c. England. Presented by F. Walker, Esq.
d. England.

#### O 10. BYTHOSCOPUS TREMULÆ.

Cicada Tremulæ, Estlund, Act. Holm. 1796, 129, pl. 5, f. 3. Classus Tremulæ, Zett. Faun. Lapp. i. 542, 3. Ins. Lapp. 302, 3. Sweden.

e e. Elytrorum costa variegata.

### O11. BYTHOSCOPUS VARIUS.

Cicada varia, Fabr. Ent. Syst. iv. 42, 65.

Flata varia, Fabr. Syst. Rhyn. 55, 49.

O Iassus varius, Germ. Mag. Ent. iv. 82, 6. Ahrens, Faun. Ins. xvi. 18.

Bythoscopus varius, Herr.-Schæff. Nom. Ent. 69.

O Idiocerus stigmaticalis, Lewis, Trans. Ent. Soc. i. 28, pl. 7, f. 2. Curt. Brit. Ent. 733, 1.

Idiocerus maculicollis, Curt. Brit. Ent. 733, 2.

Oldiocerus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 208, 449.

a—f. England. Presented by F. Walker, Esq. g—i. England. j. Sweden.

### U12. BYTHOSCOPUS PŒCILUS.

Bythoscopus pœcilus, Herr.-Schæff. Nom. Ent. 69. a, b. Geneva. Presented by M. Goureau.

#### C13. BYTHOSCOPUS NOTATUS.

Bythoscopus notatus, Herr.-Schæff. Nom. Ent. 69. Cicada exaltata? Fabr. Syst. Rhyn. 78, 82.

a. ——?

d d. Venæ omnino fuscæ.

### 0 14. BYTHOSCOPUS LARVATUS.

Bythoscopus larvatus, Herr.-Schæff. Nom. Ent. 69. Germany.

#### 15. Bythoscopus venosus.

Cicada venosa, Fall. Act. Holm. xxvii. 1806, 25, 19. Zett. Ins. Lapp. 303, 6.

Iassus venosus, Germ. Mag. Ent. iv. 86, 18. Ahrens, Faun. v.

Iassus puncticeps? Germ. Ahrens, Faun. xvii. 12.

Bythoscopus venosus, Herr.-Schaff. Nom. Ent. 69. Faun. cxliii.

- DProstigmoderus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 210, 453. Resomus? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 211, 455.
  - a, b. England. Presented by F. Walker, Esq. c, d. England.
  - a a. Vertex desuper linearis, angulum obtusum formans, cujus brachia extus incrassata.
  - b. Series tres areolarum discoidalium, quarum singula e pluribus quam quatuor composita.

## U16. BYTHOSCOPUS RETICULATUS.

- Cicada reticulata, Mus. Lesk. 116, 32, 35. Gmel. Ed. Syst. Nat. i. 4, 2111, 224.
- O Iassus reticulatus, Fabr. Ent. Syst. iv. 57, 46. Syst. Rhyn. 98, 64. Panz. Faun. Ins. Germ. cxxvi. 4.
- 2 Iassus mixtus, Fabr. Syst. Rhyn. 86, 7. Germ. Mag. Ent. iv. 83, 7. Ahrens, Faun. xvi. pl. 17. Burm. Gen. Iassus, 2, f. 6, 8. Bythoscopus reticulatus, Herr.-Schæff. Nom. Ent. 69. Faun.

exxvi. 4, exxx. 11.

- Dalagus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 214, 461.
  - a, b. England. Presented by F. Walker, Esq.

c, d. England.

b b. Areolæ tres discoidales, quarum una alterave in duas aut tres divisa.

#### 17. BYTHOSCOPUS VIRESCENS.

(Cicada virescens? Mus. Lesk. 116, 34. Gmel. Ed. Syst. Nat. i. 4, 2111, 226. Fabr. Ent. Syst. iv. 46, 84. Syst. Rhyn. 79, 84. Fall. Act. Holm. xxvii. 1806, 32, 31. Hem. Suec. Cic. 52, 45.

Bythoscopus virescens, Herr.-Schaff. Nom. Ent. 69. Burm. Gen. Buth. 16.

O Iassus virescens, Germ. Mag. Ent. iv. 45. Curt. Brit. Ent. 636, 8.

Macropsis virescens, Lewis, Trans. Ent. Soc. i. 50, pl. 8, f. 3. Pediopsis virescens, Amyot et Serv. Hist. Nat. Hém. 586, 1. Pediopsis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 212, 457.

Var.? Cicada graminea, Fabr. Ent. Syst. Suppl. 521, 47.

Alassus gramineus, Fabr. Syst. Rhyn. 77, 71. Germ. Mag. Ent. iv. 81, 4.

a. Sweden.

#### 5 18. BYTHOSCOPUS MARGINATUS.

Bythoscopus marginatus, Herr.-Schæff. Nom. Ent. 69. Faun. exliii. 7.

Mecdaria? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 213, 460. Europe.

#### 49. Bythoscopus nassatus.

Iassus nassatus, Germ. Ahrens, Faun. Ins. xvii. 13.
Bythoscopus nassatus, Herr.-Schæff. Nom. Ent. 69. Faun. exliii.
8.

Pacechia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 212, 458.

a-d. England. Presented by F. Walker, Esq. e, f. England.

# 20. Bythoscopus flavicollis.

Cicada flavicollis, Linn. Syst. Nat. ii. 709, 33. Faun. Suec. 891. Fabr. Sp. Ins. ii. 325, 25. Mant. Ins. ii. 271, 33. Ent. Syst. iv. 37, 42. Syst. Rhyn. 75, 64. Gmel. Ed. Syst. Nat. i. 4, 2106, 33.

Cicada Alni, Schrank, Faun. Boic.

Cicada diadema, Fabr. Ent. Syst. iv. 44, 74.

Cicada bipustulata, Fabr. Ent. Syst. iv. 45, 79. Cicada triangularis, Fabr. Ent. Syst. iv. 46, 82.

Cicada flavescens, Fabr. Ent. Syst. iv. 46, 85. Syst. Rhyn. 79, 85.

[ Iassus bipustulatus, Fabr. Syst. Rhyn. 88, 18. Germ. Mag. Ent. iv. 83, 10.

Iassus triangularis, Fabr. Syst. Rhyn. 88, 19. Germ. Mag. Ent. iv. 84, 13.

Cic. 1829, 62, 5. Zett. Faun. Lapp. i. 543, 4. Ins. Lapp. 302, 4. (Vars. Obscurus, pallens, triangularis, flavicollis, Rosæ, fusculus, capueinus, tristis).

Iassus diadema, Fabr. Syst. Rhyn. 87, 14.

Iassus flavicollis, Germ. Mag. Ent. iv. 85, 14. Ahrens, Faun. Ins. iii. 23. Curt. Brit. Ent. 636, 3.

O Iassus Tiliæ, Ahrens, Faun. Ins. xiv. 14.

Bythoscopus diadema, Herr.-Schæff. Nom. Ent. 69.

☐ Iassus ferrugineus, Curt. Brit. Ent. 636, 2. ☐ Iassus pulchellus, Curt. Brit. Ent. 636, 4. ☐ Iassus fenestratus, Curt. Brit. Ent. 636, 5. ☐ Iassus reticulatus, Curt. Brit. Ent. 636, 6. ☐ Iassus personatus, Curt. Brit. Ent. 636, 7.

Bythoscopus flavicollis, Burm. Handb. Ent. ii. 1, 110, 3.

a-o. England.

p-s. Scotiand. Presented by E. Doubleday, Esq.

t-z. ?

aa-jj. Sweden.

kk. ----?

### 21. Bythoscopus nigritulus.

Var. β. flavicollis?
Iassus fruticola, Fall. Hem. Suec. Cic. 62, 5. Var. γ.
Iassus nigritulus, Zett. Faun. Lapp. i. 544, 5. Ins. Lapp. 303, 5.
Sweden.

## 22. Bythoscopus nitidulus.

Cicada nitidula, Fabr. Mant. Ins.-ii. 273, 57. Gmel.; Ed. Syst. Nat. i. 4, 2114, 176.

Iassus cereus? Germ. Ahrens, Faun. xvii. 14.
Bythoscopus nitidulus, Herr.-Schaff. Nom. Ent. 69.
Europe.

## 023. BYTHOSCOPUS NANUS.

Bythoscopus nanus, Herr.-Schæff. Nom. Ent. 69. Faun. 143, 6. Hephathus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 215, 463. Europe.

## Group -----?

#### 24. BYTHOSCOPUS? HYPAULACIA.

Hypaulacia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 210, 454. France.

#### C25. Bythoscopus? Zinnevia.

Zinnevia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 212, 456.
Italy.

### 26. Bythoscopus? Peltophlyctis.

Peltophlyctis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 218, 472. France.

### 27. Bythoscopus? Penthopitta.

Penthopitta, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 219, 474.
 Var.? Penthopitta dubia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 219, 474.

France.

## 0 28. BYTHOSCOPUS? NACIA.

O Nacia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 218, 471. Piedmont.

#### 29. BYTHOSCOPUS GUTTATUS.

Ferrugineus, flavo varius ; facies nigro notata ; abdomen luteum, subtus fulvum, apice nigrum ; pedes testacei ; alæ anticæ limpidæ, ferrugineo bifasciatæ, venis albo guttatæ ; alæ posticæ fuscæ ad discos cinereæ.

Ferruginous, mottled with yellow: head as broad as the chest; crown narrow, about one-third of the breadth of the head, with a slight longitudinal ridge; its length and breadth almost equal; face slightly convex, mottled with black: eyes large, occupying the whole length of the head: chest flat; scutcheon with a suture across the middle: abdomen luteous; underside tawny, black towards the tip: legs testaceous: wings broad: fore-wings colourless, adorned

with two ferruginous bands which are black towards the fore border, the first beyond the middle, the second at the tip; veins with white dots: hind-wings brown; their disks gray. Length of the body 3 lines; of the wings 7 lines.

a. Brazil.



# 30. Bythoscopus rivularis.

Ferrugineus, nigro varius; scutum nigrum; scutellum nigro bimaculatum; pectus piceo varium; abdominis dorsum nigrum; alæ anticæ albidæ, fusco variæ; alæ posticæ subcinereæ, apice fuscæ.

Pale ferruginous, minutely mottled with black: head extremely short, as broad as the chest, convex and almost semicircular in front, very concave along the hind border; its length above not more than one-twelfth of its breadth: crown punctured, transversely striated, rather longer on each side than in the middle; face roughly punctured, almost flat, slightly striated on each side: shield black, transversely striated; scutcheon with a black spot on each side of the fore border: breast ferruginous, partly pitchy: abdomen black above, pale ferruginous beneath: legs ferruginous: fore-wings dingy white, thickly interspersed with brown, which here and there forms streaks including whitish dots: hind-wings slightly gray, brown towards the tips. Length of the body 5 lines; of the wings 8 lines.

a, b. Van Diemen's Land. From Dr. Hooker's collection. c. New Holland. From Mr. Lambert's collection.

### 0 31. Bythoscopus ferrugineus.

Fulvus, sat angustus, nigro varius; abdomen nigrum, fulvo fasciatum; alæ posticæ cinereæ.

Tawny, rather narrow, tapering from the head to the tip of the abdomen: head minutely punctured, very short-conical, a little broader than the chest, black along the fore border, extremely concave behind; crown extremely short in the middle, where its length is not one-twelfth of its breadth, rather broader on each side; underside transversely striated towards the front; face broad, almost flat: shield finely striated across; scutcheon minutely punctured, having on each side of the fore border a triangular compartment, which is partly smooth, partly slightly striated: breast partly black on each

PART III.

side: abdomen black; hind borders of the segments tawny: veins of the fore-wings few, black, excepting those along the hind border: hind-wings gray. Length of the body  $4\frac{1}{2}$  lines; of the wings  $9\frac{1}{2}$  lines.

a. Java. From the East India Company's collection.

## O 32. Bythoscopus remotus.

Ferrugineus, nigro varius; abdomen piceum, abdominis segmenta ferrugineo fasciata; pedes picei; alæ posticæ fuscæ.

Pale ferruginous, mottled with black: head finely striated longitudinally, as broad as the chest, convex, and almost semicircular in front, equally concave behind; its length equal between the eyes, not one-sixth of its breadth; face triangular, flat, indistinctly striated on each side: shield finely striated transversely; scutcheon very minutely punctured: abdomen pitchy; hind borders of the dorsal segments ferruginous: legs pitchy: fore-wings slightly rugulose: hind-wings brown. Length of the body 4 lines; of the wings 8 lines.

a, b. Philippine Islands. From Mr. Wood's collection.

#### O 33. BYTHOSCOPUS FULVUS.

Testaceo fulvus; caput nigro varium; pectus nigrum, fulvo bimaculatum; abdomen nigro notatum, subtus nigrum; pedes nigro varii; alæ posticæ sublimpidæ, apice subfuscæ.

Testaceous tawny: head extremely short, as broad as the chest, slightly convex in front, more concave behind; crown slightly widening on each side, its length in the middle not more than one-twelfth of the breadth; a black band on the front, which is transversely striated; face flat, roughly punctured, its disk surrounded by a black oval, which encloses two black stripes, sending forth parallel branches on each side: plates on each side of the epistoma marked with black: chest transversely striated; shield very convex along the fore border, slightly concave behind: breast black, with a tawny spot on each side: abdomen with blackish marks along each side, black beneath: oviduct ferruginous: fore-thighs streaked with black beneath; middle-thighs black at the base; hind-thighs black along half the length: tips of hind-shanks black: hind-wings almost colourless, brownish towards the tips. Length of the body 4 lines; of the wings 7 lines.

a. Van Diemen's Land. Presented by the Rev. Augustus Beaufort.

# √ 0 34. Bythoscopus dorsalis.

Fuscus, flavo notatus; pectoris segmenta picea, flavo marginata; abdomen nigrum, fulvo fasciatum, subtus apice fulvum; pedes nigri; pedes postici flavi, nigro vittati; alæ anticæ albo guttatæ; alæ posticæ cinereæ.

Dark brown, varied with pale yellow marks: head extremely short, as broad as the head, slightly rounded along the fore border, rather more convex behind; crown transversely striated; its length in the middle much less than that on each side; face punctured, almost flat: chest very finely striated across: pectoral segments pitchy, with yellow borders: abdomen black; hind borders of the segments tawny; underside tawny towards the tip: legs black; hind-legs yellow, striped with black: fore-wings thickly covered with whitish dots, which form a short slightly oblique stripe in the disk near the base: hind-wings gray. Length of the body  $3\frac{1}{2}$ —4 lines; of the wings 7—8 lines.

a. New Holland. Presented by the Haslar Hospital.
b. ——? Presented by the Entomological Club.

## 0 35. Bythoscopus nigroæneus.

Nigroæneus, fulvo varius; pectus nigrum; abdomen nigrum, lateribus basi subtusque ferrugineum; pedes nigri, femoribus basi genubusque fulvis, tarsis posticis basi flavis; alæ anticæ albido guttatæ et basi fasciatæ; alæ posticæ cinereæ.

Bronze-black: head formed like that of B. dorsalis. Some tawny marks on each side of the face, and of the epistoma: shield with numerous tawny marks, transversely striated; scutcheon slightly rugulose, with very few tawny marks: a smooth triangular compartment on each side of the fore border: breast black: abdomen black, ferruginous on each side at the base; underside ferruginous, with a pitchy tip: legs black: thighs towards the base and knees tawny; hind-feet yellow at the base; fore-wings with dingy-white marks, which are most numerous and partly confluent towards the tips; an oblique dingy-white band near the base: hind-wings dark gray. Length of the body 3 lines; of the wings 7 lines.

a. Van Diemen's Land. From Dr. Hooker's collection.

### O36. BYTHOSCOPUS ANGULIFERUS.

Ferrugineus; facies anticè nigro-ænea; scutellum nigro-æneum, apice ferrugineum; abdominis dorsum piceum; tibiæ piceo variæ; alæ anticæ sublimpidæ, nigro notatæ et bifasciatæ; alæ posticæ cinereæ.

Ferruginous, minutely punctured: head extremely short, as broad as the chest, very slightly rounded in front; hind border forming a very obtuse angle: crown broader on each side than in the middle; face very slightly convex, brassy-black towards the front, with a very indistinct longitudinal ridge: scutcheon brassy-black, with a transverse suture, ferruginous at the tip: abdomen pitchy, ferruginous beneath: shanks partly pitchy: fore-wings almost colourless, mostly punctured, with many small black marks, and with two broad short irregular black bands across the disks: hind-wings gray. Length of the body  $2\frac{3}{4}$  lines; of the wings 6 lines.

a. New Holland. Presented by the Haslar Hospital.

# O 37. Bythoscopus stramineus.

Flavus, fulvo notatus; alæ anticæ fulvescentes, ad discos albæ; alæ posticæ albidæ.

Pale yellow, almost smooth, with some slight tawny marks: head as broad as the chest; crown flat, rounded in front, with a slight short somewhat arched transverse furrow near the fore border, equally long across its whole breadth, which, excluding the eyes, is nearly four times the length; epistoma slightly widening towards the mouth: chest flat, finely transversely striated: fore-wings transparent, with a slight tawny tinge; disks mostly white; hind borders yellow, with some tawny marks: hind-wings whitish. Length of the body 2 lines; of the wings 5 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

## 38. Bythoscopus latifrons.

Testaceus, nigro varius; pedes nigro vittati; alæ anticæ ferrugineæ, testaceo et piceo maculatæ, ad costam limpidæ.

Testaceous: head and chest varied with black: head extremely short, as broad as the chest, straight along the fore border, slightly concave behind; crown forming an edge; front and face black, with testaceous dots; face flat, slightly recurved: scutcheon and breast mostly black: abdomen pale testaceous beneath: thighs and shanks striped with black: fore-wings ferruginous, with some large irregular pale testaceous and pitchy spots, colourless along the fore border from the middle till near the tips. Length of the body  $2\frac{1}{2}$  lines; of wings  $4\frac{1}{2}$  lines.

a. New Holland. Presented by the Haslar Hospital.

## 939. Bythoscopus transversus.

Flavus, nigro varius; pedes testacei, nigro varii; alæ cupreo-subfulvæ; alæ anticæ apice fuscæ.

Bright yellow: head extremely short, as broad as the chest, black beneath, very slightly convex along the fore border, much more concave behind; length of the crown in the middle about half its length on each side, and not one-twelfth of the breadth; front transversely striated; face flat, roughly punctured, with two stripes of short yellow bands: chest transversely striated: breast and abdomen black; hind borders of the abdominal segments yellow: legs pale testaceous: middle-thighs black at the base; hind-thighs black, excepting the tips; hind-shanks striped with black: wings transparent, slightly tawny, with a coppery tinge: fore-wings with a brown spot on each border near the tips which are brown; veins tawny, some of the cross-veins black. Length of the body  $2\frac{1}{2}$ —3 lines: of the wings 6—7 lines.

Var.  $\beta$ . Head yellow beneath, with a black band on the front, a black spot near each eye, and two rows of short black bands on the face: breast partly yellow.

Var. y. Abdomen luteous above, with yellow and black bands along the hind borders of the segments.

a, b. New Holland. Presented by the Haslar Hospital.

c. New Holland. From Capt. Parry's collection.

## 40. Bythoscopus luridus.

Rufo-ferrugineus, flavo guttatus; facies piceo bimaculata; scutellum piceum; pectus flavum, disconigro; abdomen nigrum, utrinque ferrugineum, subtus flavum; pedes fulvi, femoribus flavis; alæ anticæ luridæ, albo guttatæ; alæ posticæ cinereæ.

Reddish-ferruginous, with yellow dots: head extremely short, as broad as the chest, slightly rounded along the fore border, more convex behind; front transversely striated, a little longer on each side than in the middle, where its length is less than one-twelfth of its breadth; a pitchy mark on each side of the face, which is punctured, and another on each side of the epistoma: shield transversely striated; scutcheon finely punctured, mostly pitchy: breast yellow, with a black disk: abdomen black, ferruginous on each side, yellow beneath: legs tawny; thighs yellow: fore-wings lurid, with white marks, which are smallest and most numerous towards the tips: hind-wings gray. Length of the body  $3\frac{1}{4}$  lines; of the wings  $7\frac{1}{2}$  lines.

a. New South Wales. From Mr. Pamplin's collection.

## 41. Bythoscopus capensis.

Testaceus, fusco varius ; scutellum apice et pectus albida; abdomen ferrugineum; pedes albidi, fusco maculati; alæ anticæ luridæ, fusco maculatæ; alæ posticæ subcinereæ.

Testaceous, varied with brown: head very short, as broad as the chest, semicircular, very convex in front and equally concave along the hind border: crown longer on each side than in the middle, where its length is about one-sixth of its breadth; front occupying part of the upper surface; face truncate-conical; epistoma small, widening towards the mouth: shield very convex in front, almost straight along the hind border; scutcheon towards the tip and breast whitish: abdomen ferruginous: legs whitish, spotted with brown: fore-wings slightly lurid, with some dark brown spots along the fore border, and with some brown streaks on the disks of the areolets; veins brown: hind-wings pale gray. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. South Africa. Presented by Dr. A. Smith.

# 42. Bythoscopus sinensis.

Niger, luteo guttatus; thoracis latera flavescentia; pedes lutei, femoribus nigro et flavo vittatis, tibiis supra piceis; alæ anticæ fuscæ; alæ posticæ cinereæ.

Black: head very short, full as broad as the chest: mostly luteous on each side beneath; crown mostly yellowish-luteous, rounded in front, with parallel borders, or equally long across the whole breadth. which, excluding the eyes, is hardly six times the length; a straight transverse furrow near the fore border; face flat, almost conical: chest covered with yellowish-luteous dots; shield very convex along the fore border, very slightly concave behind; a triangular luteous compartment on each side of the scutcheon; breast mostly dingy yellow on each side: legs luteous; thighs striped with black and yellow; shanks pitchy above: fore-wings brown: hind-wings gray. Length of the body 3 lines; of the wings 7 lines.

a. Hong Kong. Presented by J. C. Bowring, Esq.

#### 243. BYTHOSCOPUS ATER.

Niger; alæ posticæ fuscæ.

Black, slightly shining: head very short, as broad as the chest; crown rounded in front, with parallel borders, longitudinally striated; its breadth, excluding the eyes, about six times its length; face almost flat, with a transverse furrow between the eyelet, and slight cross ridges on each side: shield very finely striated across, very convex along the fore border, slightly concave behind; scutcheon almost smooth: hind-wings brown. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

a. Philippine Islands. From Mr. Cuming's collection.

#### 744. BYTHOSCOPUS CUPREUS.

Rufus; facies scutique latera alba; pectus et abdomen nigra; pedes flavi; alæ anticæ limpidæ, cupreo trifasciatæ.

Pale red: head full as broad as the chest, very short; crown rounded in front, equally long across the whole breadth, which,

excluding the eyes, is about thrice the length; hind border and face whitish, the latter flat, slightly tinged in part with very pale red; epistoma very small; shield very finely striated across, convex in front, almost straight along the hind border, white on each side: breast and abdomen black: legs pale yellow: fore-wings colourless, with three coppery ferruginous bands, one at the base, the third at the tip; veins ferruginous: hind-wings colourless. Length of the body 2 lines; of the wings 5 lines.

a, b. New Holland. From Mr. Argent's collection.

## 1045. Bythoscopus albidus.

Flavo-albus; pedes flavi; alæ anticæ subflavescentes; alæ posticæ albidæ.

Yellowish-white: head short, as broad as the chest, slightly rounded in front; crown almost flat, equally long across its whole breadth, which, excluding the eyes, is full thrice the length; face truncate-conical, very slightly convex: epistoma subquadrate: chest flat; shield finely transversely striated; scutcheon smooth, with an almost straight suture across the middle: legs pale yellow: wings transparent: fore-wings slightly tinged with yellow: hind-wings whitish. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

a, b. Honduras. From Mr. Miller's collection.

## 0 46. Bythoscopus australis.

Testaceous, fusco undatus, subtus flavus; facies fusco vittata et multifasciata; scutellum flavum, fusco trivittatum, nigro bimaculatum; pectus flavum; abdomen supra ferrugineum, albido fasciatum, subtus flavum; alæ anticæ luridæ; alæ posticæ subcinereæ.

Testaceous, adorned with undulating brown marks, yellow beneath: head very short, as broad as the chest, indistinctly angular in front; crown longer on each side than in the middle, where its length is not more than one-twelfth of its breadth; face punctured, large, truncate-conical, with a spindle-shaped brown stripe, and on each side with a row of short brown bands; epistoma narrow, linear: shield transversely striated, semicircular along the fore border, very slightly concave behind; scutcheon yellow, with three brown streaks, and with a black spot on each side of the fore border: breast yellow

with some small black spots: back of the abdomen ferruginous; hind borders of the segments whitish; underside yellow with a darker border: legs testaceous, with some darker stripes; hind-thighs and hind-shanks yellow: fore-wings lurid: veins black: hind-wings grayish. Length of the body 3 lines; of the wings  $5\frac{1}{2}$  lines. a. New Holland. Presented by the Haslar Hospital.

# 47. Bythoscopus obsoletus.

Pallidè viridis; scutellum antice nigro bimaculatum; alæ anticæ sublimpidæ; alæ posticæ albidæ.

Pale green: head short, as broad as the chest, slightly convex in front, slightly concave along the hind border; crown equally long across the whole breadth, which is about four times the length; face conical, slightly streaked on each side; epistoma widening towards the mouth: shield slightly convex along the fore border, almost straight behind; scutcheon with a triangular black spot on each side of the fore border: oviduct yellowish green; fore-wings almost colourless; veins pale green: hind-wings whitish, iridescent. Length of the body 2 lines; of the wings 5 lines.

a. Hudson's Bay. Presented by G. Barnston, Esq.

## 048. BYTHOSCOPUS AFRICANUS.

Æneo-testaceus; caput nigro varium; scuti discus nigricans; abdomen supra nigrum; alæ limpidæ.

Pale testaceous, with a slight brassy tinge: head short, full as broad as the chest; crown with a black band and a transverse furrow, much rounded in front, slightly concave along the hind border; its length in the middle about half its breadth, excluding the eyes; face flat, with a black stripe, and on each side with a row of slightly oblique black bands; side borders black; epistoma with two black spots adjoining the face, and with three slight keels, the side pair each accompanied by a pitchy stripe: disk of the shield slightly blackish; scutcheon with a transverse semicircular suture: back of the abdomen with a black disk; underside blackish on each side towards the base; two black spots on the hind border of the last segment; valves of the oviduct very long: wings colourless; veins testaceous. Length of the body 2 lines; of the wings  $4\frac{1}{2}$  lines.

a. Sierra Leone. Presented by the Rev. D. F. Morgan.

## 49. BYTHOSCOPUS STIPATUS.

Albus, fusco marmoratus; abdomen album vel flavum; alæ posticæ albidæ, apice subcinereæ.

White, marbled with brown: head rather short, as broad as the head, forming an indistinct obtuse angle in front; crown flat, longer in the middle than on each side, its breadth, excluding the eyes, about four times its length; face truncate-conical, very slightly convex; epistoma linear, sometimes widening towards the mouth: chest almost flat; shield very convex in front, hardly concave along the hind border: breast white, sometimes with brown spots: abdomen white or pale yellow: hind-wings whitish with pale gray tips. Length of the body  $2\frac{1}{4}$  lines; of the wings  $4\frac{1}{2}$  lines.

a, b. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

#### ○ 50. BYTHOSCOPUS SOBRIUS.

Testaceus, subtus albidus; scutellum ferrugineum, apice testaceum; pedes flavi; alæ posticæ limpidæ.

Testaceous, whitish beneath: head short, rounded in front, nearly as broad as the chest; crown punctured, with an impression on each side of the disk, and with an indistinct short ridge adjoining the hind border; its length in the middle rather exceeding that on each side, and about one-fourth of the breadth without the eyes; face pale testaceous, flat and punctured on the disk, with a convex smooth compartment on each side; epistoma conical, whitish towards the mouth: shield slightly striated transversely, equally long across its whole breadth; scutcheon pale ferruginous, with a transverse suture near the tip, which is testaceous: oviduct ferruginous: legs yellow: fore-wings and veins testaceous; hind-wings colourless. Length of the body  $2\frac{1}{4}$  lines; of the wings  $4\frac{1}{2}$  lines.

a, b. Hudson's Bay. Presented by G. Barnston, Esq.

# 51. BYTHOSCOPUS FLAVUS, Barnston, MSS.

Ferrugineus, subtus flavus; scutum flavo marginatum; abdominis dorsum luteum, segmentis albo fasciatis; pedes flavi; alæ anticæ subfulvæ, ad costam flavo vittatæ, apice sublimpidæ; alæ posticæ albæ.

Nearly allied to B. flavicollis. Pale ferruginous, bright yellow beneath; crown forming an edge which is very obtusely angular; front with a broad short yellow band across the disk, on each side of which there is a black dot: face pale ferruginous, roughly punctured, almost smooth, having on each side a smooth convex testaceous compartment: shield finely transversely striated, with yellow borders; scutcheon minutely punctured: back of the abdomen luteous; hind borders of the segments white: legs bright yellow: fore-wings slightly tawny, almost colourless towards the tips, with a yellow stripe tapering along the fore border from the base to two-thirds of the length: hind-wings white. Length of the body 2 lines; of the wings 4 lines.

a-c. Hudson's Bay. Presented by G. Barnston, Esq.

#### 052. Bythoscopus auroalbus.

Albus, auro varius; scutellum fusco quadriguttatum; abdomen fasciis maculisque fuscis trivittatum; pedes fusco notati; alæ anticæ auro bifasciatæ; alæ posticæ albæ.

White: head and chest adorned with gold markings, which occupy most of the surface: head short, as broad as the chest, almost angular in front, concave along the hind border; crown flat, a little shorter on each side than in the middle, where its length is about one-third of its breadth; face almost oval; epistoma subquadrate: shield very convex along the fore border, almost straight behind; scutcheon with a slight transverse suture near the tip, and with two brown dots on each side: abdomen with a row of short pale brown bands on the disk, and with a row of pale brown spots along each side: legs slightly marked with pale brown: fore-wings adorned with gold net-work and with two irregular gold bands; three brown dots on the fore border near the tip, one on the hind border, and one in the disk near the base: hind wings white. Length of the body  $1\frac{3}{4}$  line; of the wings 4 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

## 33. Bythoscopus Strobi.

Bythoscopus Strobi, Fitch, The Senate, No. 30, 58. a. New York. From Dr. Fitch's collection.

## 54. Bythoscopus clitellarius.

Bythoscopus clitellarius, Say, Journ. Acad. Nat. Sci. vi. 307. a. New York. From Dr. Fitch's collection.

#### 055. BYTHOSCOPUS VARIABILIS.

- O Athysanus variabilis, Fitch, The Senate, No. 30, 60.
  - a. United States. Presented by the Entomological Club.
  - b. New York. From Dr. Fitch's collection.

## 56. Bythoscopus minor.

O Athysanus minor, Fitch, The Senate, No. 30, 60. a. New York. From Dr. Fitch's collection.

## 57. BYTHOSCOPUS ALTERNATUS.

DIdiocerus alternatus, Fitch, The Senate, No. 30, 59. a. New York. From Dr. Fitch's collection.

### Genus 8. IASSUS.

Iassus, p., Fabr., Fall., Germ.

Cicada, p., Thunb. Fall. Zett.
/ Iassus, Herr.-Schaff. Nom. Ent. 40.

Aphrodes, p. et Agallia, Curtis.

Iassus, p. et Athysanus, Burm., Gen. Cicadula, p., Zett.

1 Thamnotettix, Zetterstedt, Boheman.

O Deltocephalus, Boheman.

Aphrodes et Dikraneura, Hardy.

a. Vertex lunatus (linea longitudinali media lateralibus non longiore), Herr.-Schæff. Nom. Ent. 69.

## O1. IASSUS PUNCTATUS.

Iassus punctatus, Fall. Herr.-Schæff. Nom. Ent. 69. Faun. exxii. 6.

© Cicada punctata, Thunb. Act. Upsal. iv. 21, 36. Fall. Act. Holm. xxvii. 1806, 38, 41. Hem. Suec. Cic. 52. Zett. Faun. Lapp. i. 535, 34.

Cicadula punctata, Zett. Ins. Lapp. 298, 10.

Cicada punctata? Fabr. Sp. Ins. ii. 327, 39. Mant. Ins. ii. 272, 52

Ent. Syst. iv. 44, 76. Syst. Rhyn. 78, 79. Geoff. Ins. Par. i. 417, 4. Gmel. Ed. Syst. Nat. i. 4, 2106, 124. Turt. Syst. Nat. ii. 597.

Europe.

## 2. IASSUS PUNCTICOLLIS.

Iassus puncticollis, Herr.-Schaff. Nom. Ent. 69. Faun. exxvi. 7. Germany.

- a a. Vertex obtusius aut acutius triangularis (linea longitudinali media lateralibus longiore).
- b. Parvi, angusti subcompressi, capite antice rotundato tumidulo.
  - c. Pallidi, capite nigro maculato.

## C3. IASSUS 4-NOTATUS.

Iassus 4-notatus, Herr.-Schæff. Nom. Ent. 70. Faun. cxxii. 4, C. Cicada 4-notata, Fabr. Ent. Syst. iv. 71. Syst. Rhyn. 78, 77. Fall. Act. Holm. xxvii. 1806, 33, 32. Panz. Faun. Ins. Germ. ciii. 7? Fall. Act. Holm. 1806, 33, 32. Zett. Faun. Lapp. i. 532, 27.

O Cicadula 4-notata, Zett. Ins. Lapp. 296, 1.

OStigmocratus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 213, 459.

a-d. England. Presented by F. Walker, Esq.

# 4. IASSUS VARIATUS.

Iassus variatus, Herr.-Schæff. Nom. Ent. 70.
o Cicada variata, Fall. Act. Holm. xxvii. 1806, 34, 34. Hem. Suec. Cic. 37.

Europe.

## 05. IASSUS ALPINUS.

Iassus alpinus, Herr.-Schaff. Nom. Ent. 70. Cicada alpina, Zett. Faun. Lapp. i. 533, 30, 4. Cicadula alpina, Zett. Ins. Lapp. 297, 5. Europe.

## 06. IASSUS 6-NOTATUS.

Iassus 6-notatus, Germ. Faun. Ins. xiv. 13. Herr.-Schæff. Nom.

Ent. 70. Faun. exxii. 4, d.

Cicada sexnotata, Fall. Act. Holm. xxvii. 1806, 34, 33. Hem. Suec.

Cic. 47, 36. Zett. Faun. Lapp. i. 533, 29.

Cicadula sexnotata, Zett. Ins. Lapp. 297, 4.

a. Scotland. Presented by R. N. Greville, Esq. b, c. ——?

Var. Cicada strigipes, Zett. Faun. Lapp. i. 532, 28.

Iassus strigipes, Herr.-Schæff. Faun. cxxii. 4, a, b, g—i.

Cicadula strigipes, Zett. Ins. Lapp. 296, 2.

a—d. England. Presented by F. Walker, Esq. e—g. Scotland. Presented R. N. Greville, Esq. h, i. Sweden.

# 7. IASSUS MACULIPES.

Cicadula maculipes, Zett. Ins. Lapp. 297, 3. Lapland.

#### 8. IASSUS STRIOLA.

Cicada striola, Fall. Act. Holm. xxvii. 1806, 31, 28. Hem. Suec. Cic. 44, 32.

Iassus striola, Germ. Faun. Ins. xv. 15. Herr.-Schaff. Faun. cxxii. 4, f. Nom. Ent. 70. Burm. Gen. (Iassus) pl., f. 2.

Var.? Iassus frenatus, Germ. Mag. Ent. iv. 86, 16.

O Protænia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 225, 483.

a—d. England. Presented by F. Walker, Esq. e. — ? Presented by J. G. Children, Esq.

#### c c. Obscuri.

## O9. IASSUS PULICARIS.

Cicada pulicaris, Fall. Act. Holm. xxvii. 1806, 21, 14. Hem. Suec. Cic. 34, 15. Zett. Faun. Lapp. i. 524, 12. Ins. Lapp. 291, 12.

Iassus pulicaris, Herr.-Schæff. Faun. exxvii. 4. Nom. Ent. 70. Europe.

## 10. IASSUS FENESTRATUS.

Iassus fenestratus, Herr.-Schæff. Nom. Ent. 70. Faun. exxii. 5. Mirzacha, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 219, 475. Europe.

b b. Medii, angusti. Caput antice rotundato tumidulo.

### C11. Jassus punctifrons.

Iassus punctifrons, Germ. Mag. Ent. iv. 90, 28. Herr.-Schaff. Nom. Ent. 70. Faun. exxii. 1.

Cicada punctifrons, Fall. Hem. Succ. Cont. i. 42, 29.

Iassus ventralis, Panz. Faun. Ins. Germ. exxvi. 6.

Thamnotettix punctifrons, Boh. Vet. Akad. Ofvers, 1847, 264, 5. Act. Holm. 1847, 33, 6.

Opostigmus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 227, 488.

a-d. England. Presented by F. Walker, Esq.

## 12. IASSUS PHRAGMITIS.

Thamnotettix Phragmitis, Boh. Vet. Akad. Ofvers, 1847, 265, 6. Act. Holm. 1847, 34, 7.

Sweden.

## C<sub>13</sub>. IASSUS FRONTALIS.

Iassus frontalis, Herr.-Schæff. Nom. Ent. 70. Germany.

## 4. IASSUS SPLENDIDULUS.

Iassus splendidulus, Herr.-Schæff. Nom. Ent. 70. Faun. cxxvi. 8. Cicada splendidula, Fabr. Syst. Rhyn. 79, 83. Fall. Act. Holm. xxvii. 1806, 29, 26. Hem. Suec. Cic. 30. Cicada nitidula, Turt. Syst. Nat. ii. 598.

a. England. Presented by F. Walker, Esq.

b. Aix-la-Chapelle. Presented by F. Walker, Esq.

### O15. IASSUS LUNULATUS.

Thamnotettix lunulata, Zett. Ins. Lapp. 295, 11.
Lapland.

b b b. Parvi, elytris postice compressis, angustatis, capite subacuto.

### 0 16. IASSUS ASSIMILIS.

Iassus assimilis, Herr.-Schæff. Nom. Ent. 70. Cicada assimilis, Fall. Act. Holm. xxvii. 1806, 22, 16. Hem. Suec. Cic. 16.

Sweden.

## 717. TASSUS PASCUELLUS.

Iassus pascuellus, Herr.-Schæff. Nom. Ent. 70.

Cicada pascuella, Fall. Hem. Suec. Cic. 11.

Cicada punctipes, Zett. Faun. Lapp. 14. Ins. Lapp. 292, 14.

Sweden.

# 18. IASSUS FLAVIPENNIS.

Cicada flavipennis, Zett. Faun. Lapp. i. 525, 15. Ins. Lapp. 292, 15.

Lapland.

### 5 19. IASSUS STRIATUS.

Iassus striatus, Herr.-Schæff. Faun. cxxx. 10. Nom. Ent. 71.

Cicada striata, Linn. Syst. Nat. ii. 30. Faun. Suec. 887. Raii,
Ins. 68, 1. Geoff. Ins. Par. i. 424, 20. Gmel. Ed. Syst. Nat.
i. 4, 2103, 30. Fall. Act. Holm. xxvii. 1806, 21, 15. Hem.
Suec. Cic. 1829, 35, 17. Zett. Faun. Lapp. i. 524, 13. Ins.
Lapp. 291, 13. Fabr. Ent. Syst. iv. 39, 51. Syst. Rhyn.
77, 74. Coqueb. Illustr. i. 33, pl. 8, f. 6.

a-d. England. Presented by F. Walker, Esq.

## 20. IASSUS ATTENUATUS.

Iassus attenuatus, Germ. Mag. Ent. iv. 91, 31. Herr.-Schæff. Nom. Ent. 71. Faun. exxx. 9.

Iassus tenuis? Germ. Mag. Ent. iv. 92, 32.

Germany.

# 21. IASSUS STRIATULUS.

Iassus striatellus, Herr.-Schæff. Faun. cxxx. 8. Nom. Ent. 71.

Cicada striatula, Fall. Act. Holm. xxvii. 1806, 31, 29. Hem. Suec.

Cic. 33. Zett. Faun. Lapp. i. 529, 23.

Thamnotettix striatula, Zett. Ins. Lapp. 294, 10.

a—d. England. Presented by F. Walker, Esq. e. ——?

b b b b. Parvi, capite acute, elytris abdomine fere brevioribus, postice dilatatis.

## C22. IASSUS RUSSEOLUS.

Iassus russeolus, Herr.-Schæff. Nom. Ent. 71. Cicada russeola, Fall. Hem. Suec. Cic. 14, Sweden.

# © 23. IASSUS OCELLATUS.

Cicada ocellata, Scop. Ent. Carn. 116, 343. Geoff. Ins. Par. iii. 427, 26?

© Cicada ocellaris, Fall. Act. Holm. xxvii. 1806, 20, 13. Hem. Suec. Cic. 33, 13. Zett. Faun. Lapp. i. 523, 11. Ins. Lapp. 291, 11. Herr.-Schæff. Faun. cxxix. 11. Nom. Ent. 71.

Iassus ocellatus, Ahrens, Faun. Ins. Eur. xvii. pl. 18. Germ. Mag.

Ent. iv. 86, 19. Burm. G. (Iassus).
Aphrodes sabulicola, Curt. Brit. Ent. 633, 9.

Deltocephalus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 236, 506.

a. England. Presented by F. Walker, Esq.

b. England.

b b b b b. Mediæ magnitudinis, lati, elytris dilatatis breviusculis.

#### c. Virides.

## 24. IASSUS PALLENS.

Iassus pallens, Herr.-Schaff. Faun. cxxv. 5. Nom. Ent. 71. O Cicada pallens, Zett. Faun. Lapp. i. 522, 9. Ins. Lapp. 290, 9. Europe.

## O 25. IASSUS LIVIDELLUS.

Cicada lividellus, Zett. Ins. Lapp. 290, 5. Greenland.

# 26. IASSUS ABDOMINALIS.

Iassus abdominalis, Germ. Mag. Ent. iv. 90, 29. Faun. xvii. 19. Herr.-Schæff. Faun. exxv. 4. Nom. Ent. 71.

Cicada bicolor, Fabr. Ent. Syst. iv. 40, 55.

Cercopis abdominalis, Fabr. Syst. Rhyn. 98, 61.
Cicada abdominalis, Fall. Act. Holm. xxvii. 1806, 18, 10. Hem. Suec. Cic. 31, 10. Zett. Faun. Lapp. i. 521, 8. Ins. Lapp.

290, 6. Limonattus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 219, 473.

a. England. Presented by F. Walker, Esq. b, c.

# 27. IASSUS VENTRALIS.

Iassus ventralis, Herr.-Schaff. Nom. Ent. 71.

Cicada ventralis, Fall. Act. Holm. xxvii. 1806, 18, 11. Hem. Suec. Cic. 9.

O Iassus punctifrons, Germ. Mag. Ent. iv. 28. Herr.-Schæff. Faun. exxii. 1.

Europe.

28. IASSUS BOHEMANNI.

Cicada Bohemanni, Zett. Ins. Lapp. 290, 7. Lapland.

#### 29. IASSUS BALTEATUS.

Cicada balteata, Zett. Ins. Lapp. 290, 8. Lapland..

## 30. IASSUS LINEATUS.

Iassus lineatus, Fabr. Syst. Rhyn. 87, 9. Germ. Mag. Ent. iv. 86, 17. Faun. v. 19. Herr.-Schæff. Faun. exxiv. 13. Nom. Ent. 71.

Cicada lineata, Fabr. Ent. Syst. iv. 36, 39.

a, b. England. Presented by F. Walker, Esq.

# O31. JASSUS TRANSVERSUS.

Iassus transversus, Herr.-Schæff. Nom. Ent. 71. Cicada transversa, Fall. Hem. Suec. Cic. 20. Sweden.

### 32. IASSUS HISTRIONICUS.

Iassus histrionicus, Germ. Mag. Ent. iv. 89, 25. Panz. Faun. Ins. Germ. exxii. 3. Herr.-Schæff. Faun. exxii. 3. Nom. Ent. 71. Cercopis histrionica, Fabr. Ent. Syst. iv. 56, 44. Syst. Rhyn. 98, 62.

Cicada histrionica, Fall. Act. Holm. xxvii. 1806, 19, 12. Hem. Suec. Cic. 30, 8. Zett. Faun. Lapp. i. 523, 10. Ins. Lapp. 291, 10.

Prodesmia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 222.479.
 a—d. England. Presented by F. Walker, Esq.

# 133. IASSUS SERRATULÆ.

6 Cicada Serratulæ, Fabr. Sp. Ins. ii. 327, 34. Mant. Ins. ii. 272, 47. Ent. Syst. iv. 41, 63. Gmel. Ed. Syst. Nat. i. 4, 21, 138.

Stew. El. Nat. Hist. ii. 98. Turt. Syst. Nat. ii. 596.

Flata Serratulæ, Fabr. Syst. Rhyn. 54, 46.

Iassus Serratulæ, Germ. Mag. Ent. iv. 86, 20. Herr.-Schæff. Faun. exxx. 5. Nom. Ent. 71.

O Iassus albiger, Germ. Mag. Ent. iv. 88, 22. Ahrens, Faun. Ins. xvii. 17.

O Aphrodes concinna, Curt. Brit. Ent. 633, 1.

- Aphrodes Testudo, Curt. Ent. Mag. i. 195. Brit. Ent. 633, 2.
- Albiger, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 205, 444.
  - a. England. Presented by F. Walker, Esq.

b. England.

### O34. IASSUS PLEBEIUS.

Iassus plebeius, Herr.-Schaff. Faun. exxx. 7. Nom. Ent. 71.

Cicada erythrophthalma? Schrank, Beytr. zur Naturg. 77, 31.

Ins. Austr. 258, 498. Gmel. Ed. Syst. Nat. i. 4, 2110. 155.

Cicada, &c., Stoll, Cic. 22, 120.

Cicada plebeia, Fall. Act. Holm. xxvii. 1806, 24, 18. Hem. Suec. Cic. 36, 19. Zett. Faun. Lapp. i. 530, 24.

Iassus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 216, 465.

Thamnotettix plebeia, Zett. Ins. Lapp. 295, 12.

Aphrodes marmorata, Hardy, Proc. Tyne. Nat. Field Club, i. 427,

a, b. Scotland. Presented by J. Hardy, Esq. c—h. England. Presented by F. Walker, Esq.

### 35. IASSUS SORDIDUS.

Iassus sordidus, Herr.-Schæff. Faun. cxxx. 12. Nom. Ent. 71. Cicada plebeia, Var. γ. δ., Fall. Act. Holm. xxvii. 1806, 24, 18. Cicada plebeia, Var. γ. δ., Fall. Hem. Suec. Cic. 1929, 37.

Cicada sordida, Zett. Faun. Lapp. i. 531, 36.
Thamnotettix sordida, Zett. Ins. Lapp. 295, 14.

Sweden.

#### 36. IASSUS BREVIS.

Iassus brevis, Herr.-Schæff. Faun. exliii. 15. Nom. Ent. 71. Sanachus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 218, 470. Europe.

b b b b b b. Medii aut majores elytris elongatis.

- c. Capite multo latiori ac longiori.
  - d. Antice latiores, capite obtuso.

37. IASSUS AURATUS.

Iassus auratus, Herr.-Schæff. Nom. Ent. 71. Germany.

## 38. IASSUS PROCERUS.

Iassus procerus, Herr.-Schæff. Faun. exxix. 10. Nom. Ent. 71. Germany.

239. IASSUS FLAVOVARIUS.

Iassus flavovarius, Herr.-Schæff. Faun. exxix. 9. Nom. Ent. 71. Germany.

d d. Antice angustiores, capite plus minus triangulari.

### e. Testacei.

# 2040. IASSUS SUBFUSCULUS.

O Cicada subfuscula, Fall. Act. Holm. xxvii. 1806, 30, 27. Zett. Faun. Lapp. i. 529, 22.

Iassus subfusculus, Gérm. Faun. xvi. 19. Herr.-Schæff. Faun. exxx. 4. Nom. Ent. 72.

O Iassus pectoralis, Germ. Mag. Ent. iv. 91, 30. Burm. Handb. Ent. ii. 1, 111, 3.

Thamnotettix subfuscula, Zett. Ins. Lapp. 294, 8.
Aphrodes sulphurea, Curt. Brit. Ent. 633, 10

a, b. Scotland.
c-g. Scotland.
h-j. England.
k, l. England.

Presented by R. N. Greville, Esq.
Presented by E. Doubleday, Esq.
Presented by J. C. Dale, Esq.
Presented by F. Walker, Esq.

#### 41. IASSUS RETICULATUS.

Iassus reticulatus, Herr.-Schaff. Faun. cxxx. 11. Nom. Ent. 72.

Curt. Brit. Ent. 636, 6.

Ocicada reticulata, Thunb. Act. Upsal. iv. 21, 37. Gmel. Ed. Syst. Nat. i. 4, 2108, 140. Fall. Act. Holm. xxvii. 1806, 26. Hem. Suec. Cic. 24. Zett. Faun. Lapp. i. 526, 16.

Cicada mixta, Fabr. Syst. Rhyn. 7.

Iassus mixtus, Germ. Mag. Ent. iv. 82, 7. Ahrens, Faun. Ins. xvi. 17. Burm. Handb. Ent. ii. 1, 111, 3.

Thamnotettix reticulata, Zett. Ins. Lapp. 293, 1.

CHyposcopus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 209, 451. Europe.

#### 6 42. IASSUS ATOMARIUS.

Iassus atomarius, Germ. Mag. Ent. iv. 83, 8. Ahrens, Faun. Ins. xvi. 16. Burm. Handb. Ent. ii. 1, 110, 1. Gen. Iassus, 1. Herr.-Schæff. Faun. cxxx. Nom. Ent. 72. Amyot et Serv. Hist. Nat. Hem. 587.

Cercopis atomaria, Fabr. Ent. Syst. iv. 45. Syst. Rhyn. 97, 48.

Panz. Faun. exxx. 6, 23.

Cicada nervosa, Fall. Hem. Suec. Cic. 23.

O Epistictia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 216, 464.

a. —— ?

### e e. Virides.

### © 43. IASSUS PRASINUS.

I assus prasinus, Herr.-Schæff. Nom. Ent. 72.

Cicada prasina, Fall. Act. Holm. xxvii. 1806, 27, 22. Hem. Suec. Cic. 25. Zett. Faun. Lapp. i. 527, 17.

Thamnotettix prasina, Zett. Ins. Lapp. 293, 2.

Sweden.

### 7 44. IASSUS SIMPLEX.

Iassus simplex, Herr.-Schaff. Faun. exxvi. 7. Nom. Ent. 72. Germany.

# 45. IASSUS CRUENTATUS.

Iassus cruentatus, Herr.-Schaff. Nom. Ent. 72.

Cicada cruentata, Panz. Faun. Germ. xvi. 15. Fall. Act. Holm. xxvii. 1806, 28, 24. Hem. Suec. Cic. 27. Zett. Faun. Lapp. i. 527, 20.

Thamnotettix cruentata, Zett. Ins. Lapp. 293, 5.

Sweden.

## 46. IASSUS ABIETINUS.

Iassus abietinus, Herr.-Schæff. Nom. Ent. 72.
Cicada abietina, Fall. Act. Holm. xxvii. 1806, 28, 25. Hem. Suec.
Cic. 28.
Var. Cicada biguttata, Fall. Act. Holm. xxvii. 27, 23. Hem. Suec.
Cic. 26. Zett. Faun. Lapp. 527, 19.
Var. Cicada torneella, Zett. Faun. Lapp. 528, 21.
Thamnotettix torneella, Zett. Ins. Lapp. 294, 7.
Thamnotettix biguttata, Zett. Ins. Lapp. 293, 4.
a. Sweden.

## 47. IASSUS TINCTUS.

Thamnotettix tineta, Zett. Ins. Lapp. 294, 6. Lapland.

c c. Capite longiori ac latiori, pyramidato.

### 48. IASSUS UNDATUS.

Iassus undatus, Herr.-Schaff. Nom. Ent. 72.

Cicada vittata, Linn. Syst. Nat. ii. 710, 36. Faun. Suec. 242, 893.

Gmel. Ed. Syst. Nat. i. 4, 2107, 36. Fabr. Sp. Ins. ii. 324, 17.

Mant. Ins. ii. 270, 23. Ent. Syst. iv. 35, 33. Syst. Rhyn. 67, 23. Fuessl. Ins. Helv. 24, 463.

Cicada flammigera, Villers, Linn. Ent.

Cicada undata, Deg. Ins. iii. 119, pl. 2, f. 24. Fall. Act. Holm. xxvii. 1806, 17, 9. Hem. Suec. Cic. 29, 7. Germ. Mag. Ent. iv. 92, 34. Ahrens, Faun. Ins. Eur. Fasc. vii. pl. 20.

Iassus vittatus, Burm. Gen. f. 4, 5.

Platymetopius, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 203, 439.

a. ----?

## 49. IASSUS ROSTRATUS.

Iassus rostratus, Herr.-Schæff. Faun. 122, 2. Nom. Ent. 72. a. ——? Presented by J. G. Children, Esq.

# Group ----- ?

50. IASSUS CONSOBRINUS.

OAgallia consobrina, Curt. Ent. Mag. i. 193. England.

# O 51. IASSUS RIVULARIS.

Iassus rivularis, Germ. Mag. Ent. iv. 89, 26.
Aphrodes rivularis, Curt. Brit. Ent. 633, 3.

a, b. England. Presented by F. Walker, Esq. c. Scotland. Presented by E. Doubleday, Esq.

# 52. IASSUS PUELLA.

OAphrodes puella, Curt. Brit. Ent. 633, 4.

a. England. Presented by F. Walker, Esq.b. England.

# 53. IASSUS INSULARIS.

Caphrodes insularis, Curt. Brit. Ent. 633, 5. England.

# 54. IASSUS COSTATUS.

Aphrodes costata, Curt. Brit. Ent. 633, 6. England.

# O55. IASSUS PALLIDIPENNIS.

O Aphrodes pallidipennis, Curt. Brit. Ent. 633, 7.
England.

56. IASSUS MACULIPENNIS.

Aphrodes maculipennis, Curt. Brit. Ent. 633, 8. England.

57. IASSUS TÆNIOLA.

Aphrodes tæniola, Curt. Brit. Ent. 633, 11.

a. England. Presented by F. Walker, Esq.

b. England.

58. IASSUS CRATICULA.

O Aphrodes Craticula, Curt. Brit. Ent. 633, 12.

a. England. Presented by F. Walker, Esq.

b. England.

59. IASSUS MACULIPES.

Aphrodes maculipes, Curt. Brit. Ent. 633, 13.

a. England. Presented by F. Walker, Esq.

b. England.

60. IASSUS NITIDUS.

Aphrodes nitida, Curt. Brit. Ent. 633, 14.

a. England. Presented by F. Walker, Esq.

b. England.

61. IASSUS UNIMACULATUS.

Aphrodes unimaculata, Curt. Brit. Ent. 633, 15.

a. England. Presented by F. Walker, Esq.

b. England.

62. IASSUS LATUS.

Aphrodes lata, Curt. Brit. Ent. 633, 16.

a. England. Presented by F. Walker, Esq.

b. England.

PART III.

#### T63. IASSUS MELANOPSIS.

Aphrodes melanopsis, Hardy, Proc. Tyne. Nat. Field-Club. i. 427, 3.

a. Scotland. Presented by J. Hardy, Esq.

## 64. TASSUS JUVENCUS.

Aphrodes juvenca, Hardy, Proc. Tyne. Nat. Field-Club. i. 425, 2.
a. Scotland. Presented by J. Hardy, Esq.

# 65. IASSUS SPILOTOCEPHALUS.

Aphrodes spilotocephalus, Hardy, Proc. Tyne. Nat. Field-Club. i. 424, 1.

a. Scotland. Presented by J. Hardy, Esq.

# © 66. IASSUS ——?

CDikraneura variata, Hardy, Proc. Tyne. Nat. Field-Club, i. 423, 1.
a. Scotland. Presented by J. Hardy, Esq.

## U 67. IASSUS MACULICEPS.

Deltocephalus maculiceps, Boheman, Vet. Akad. Ofvers, 1847, 264, 2. Act. Holm. 1847, 25, 2.

Sweden.

## 68. IASSUS MULTINOTATUS.

Deltocephalus multinotatus, Boh. Vet. Akad. Ofvers, 1847, 264, 3. Act. Holm. 1847, 27, 3.

Sweden.

# 0 69. IASSUS OCELLARIS.

Deltocephalus ocellaris, Boh. Vet. Akad. Ofvers, 1847? Sweden.

## 70. IASSUS? BRACHYPTERUS.

Athysanus brachypterus, Boh. Vet. Akad. Ofvers, 1847, 264, 4. Act. Holm. 1847, 29, 4.

Sweden.

# 71. IASSUS? STYLATUS.

Athysanus stylatus, Boh. Act. Holm. 1847, 31, 5. Sweden.

## \$72. IASSUS PRODUCTUS.

Flavus; caput conicum, productum, nigro varium, rufo bivittatum; abdomen piceo et fusco varium; pedes fusco varii; alæ anticæ fusco et albo maculatæ; alæ posticæ limpidæ.

Pale yellow, head and chest flat, slightly streaked with buff: head conical; crown a little longer than broad, concave along the hind border, with a very slender longitudinal ridge, with a pale red stripe on each side, and with two black dots on the fore border; underside black, with slender, slightly curved, yellow bands on each side, and with a yellow dot in the disk: shield convex in front, almost straight along the hind border; scutcheon small, with a straight suture across the middle: breast mostly buff: abdomen buff, partly pitchy; back, towards the tip, yellow with brown streaks on each side: valves of the oviduct with buff dots: legs buff, with brown marks: fore-wings buff, paler along the fore border, with some white marks on the borders towards the tips; veins partly bordered with brown; two brown spots on each disk, and one at the tip: hind-wings colourless. Length of the body  $1\frac{1}{2}$  line; of the wings  $2\frac{1}{2}$  lines.

a-d. United States. Presented by E. Doubleday, Esq.

## 73. IASSUS TESTUDINARIUS.

Iassus testudinarius, Germ. Burm. Gen. Iassus, 4. Pennsylvania, Carolina.

## 74. IASSUS 4-PUNCTATUS.

Cicada 4-punctata, Fall. Act. Holm. xxvii. 1806, 32, 30. a, b. Scotland. Presented by R. N. Greville, Esq. c. Sweden.

### 75. IASSUS PERLATUS.

Iassus perlatus, Germ. Burm. Gen. Iassus, 5. Brazil.

# ○76. IASSUS DISTIGMA.

Iassus distigma, Germ. MSS. Brazil.

## 77. IASSUS 8-PUNCTATUS.

Iassus 8-punctatus, Burm. Gen. Iassus, 3, f. 1. Syria.

## C78. IASSUS PUNCTIFERUS.

Iassus punctiferus, Herr.-Schæff. Faun. exvi. 6. Germany.

## 79. IASSUS PROTEUS.

Iassus Proteus, Herr.-Schaff. Faun. cxxv. 8. Germany.

# 80. IASSUS ARGENTATUS.

lassus argentatus, Herr.-Schæff. Faun. exxvi. 5. Burm. Gen. Iassus, 21, f. 3, 7, 9.

CCicada argentata, Fab. Ent. Syst. iv. 38, 47. Syst. Rhyn. 77, 72. Coqueb. Illustr. i. 32, pl. 8, f. 5.

V Iassus interstitialis, Germ. Mag. Ent. iv. 90, 27. Ahrens, Faun. Ins. Eur. xvii. 20.

Athysanus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 237, 508. Europe.

### 81. IASSUS GRISESCENS.

Iassus grisescens, Herr.-Schaff. Faun. exxiv. 14. Cicada grisescens, Zett. Faun. Lapp. i. 530, 25. Thamnotettix grisescens, Zett. Ins. Lapp. 295, 13. Europe.

## ○ 82. IASSUS CROCEUS.

Iassus croceus, Herr.-Schaff. Faun. exliv. 7. Germany.

#### © 83. IASSUS IMPURUS.

Iassus impurus, Boh. Vet. Akad. Ofvers, 1847, 265, 7. Act. Holm. 1847, 37, 9.

Sweden.

#### 284. IASSUS? PROSTICTOPS.

Prostictops, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 220, 478. Piedmont.

## © 85. IASSUS? PEDEMATIA.

Pedematia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 236, 507. France.

## -86. IASSUS? CHORTOPHILUS.

Chortophilus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 237, 509.
Limonattus, var.?
France.

## 787. IASSUS? PSIMMYTHIMAS.

O Psimmythimas, Amyot, Ann. Soc. Ent. Fr. 2me Série. v. 219, 476. South France.

### 88. IASSUS? CHLOROCHRIA.

Chlorochria, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 217, 466. France.

### 89. IASSUS? XANTHOLUES.

Xantholues, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 217, 467. France, Italy.

## O 90. IASSUS? STACTOGALA.

Stactogala, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 217, 468. France.

# 91. IASSUS? EPIRRHŒNA.

DE Epirrhæna, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 214, 462. France.

### 792. IASSUS? CALEMIA.

Calemia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 217, 469. France.

## 93. IASSUS ---- ? Pupa.

a. St. James' Isle, Galapagos. Presented by C. Darwin, Esq.

## © 94. IASSUS FULVIDORSUM.

Iassus fulvidorsum, Fitch, The Senate, No. 30, 62.

a. New York. From Dr. Fitch's collection.

### 795. IASSUS IRRORATUS.

Iassus irroratus, Say, Journ. Acad. Nat. Sci. vi. 308.

a. New York. From Dr. Fitch's collection.

## 96. IASSUS ACUTUS.

Iassus acutus, Say, Journ. Acad. Nat. Sci. vi. 306.

a. New York. From Dr. Fitch's collection.

## 97. IASSUS MELSHEIMERII.

Amblycephalus Melsheimerii, Fitch, The Senate, No. 30, 61.

a. New York. From Dr. Fitch's collection.

### 098. IASSUS SAYI.

OAmblycephalus Sayi, Fitch, The Senate, No. 30, 61.

a. New York. From Dr. Fitch's collection.

#### 99. IASSUS INIMICUS.

OAmblycephalus? inimicus, Say, Journ. Acad. Nat. Sci. vi. 305.

a. New York. From Dr. Fitch's collection.

## 100. IASSUS CHLORIZANS.

Aphrodes chlorizans, Hardy, MSS.

Iassus assimilis, Ahrens, Faun. Ins. xvii. 15.

a. Scotland. Presented by J. Hardy, Esq.

## © Genus 9. TYPHLOCYBA.

Typhlocyba, Germ., Guér. Mag. Ent., Herr.-Schæff., Burm., Amyot et Serv., Hardy.

Cicada, p., Linn., Fabr., Deg., Geoff., Fall., Zett.

O Eupteryx, Curt. O Cicadula, p., Zett.

a. Elytra in apice limbata, quadriareolata, Burm. Gen. Typhl. pl. f. 6, g.

### C1. TYPHLOCYBA ULMI.

Cicada Ulmi, Linn. Syst. Nat. 21, 711, 49. Faun. Suec. 900. Fabr.
 Sp. Ins. ii. 328, 42. Mant. Ins. ii. 273, 56. Ent. Syst. iv. 45, 81. Syst. Rhyn. 78, 81. Deg. Ins. iii. 189, 8, pl. 12, f. 12—19.

Geoff. Ins. Par. i. 427, 27. Gmel. Ed. Syst. Nat. i. 4, 2114, 49. Berk. Syn. i. 113. Stew. Elem. Nat. Hist. ii. 98. Turt. Syst. Nat. ii. 598. Fall. Act. Holm. xxvii. 1806, 38, 42. Hem. Suec. Cic. 49, 39.

Typhlocyba Ulmi, Burm. Handb. Ent. ii. 1, 107, 1.

DLeptochloris, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 232, 500.

TEupteryx ocellata, Curt. Brit. Ent. 640, 8.

Typhlocyba Rubi, Hardy, Proc. Tyne. Nat. Field-Club. i. 417, 3.

a—c. Scotland. Presented by R. N. Greville, Esq.
d, e. Scotland. Presented by E. Doubleday, Esq.
f, g. Scotland. Presented by J. Hardy, Esq.
h—k. England. Presented by F. Walker, Esq.

## 2. Typhlocyba elegantula.

Cicada elegantula, Dalman, MSS. Zett. Faun. Lapp. i. 536, 35. Cicadula elegantula, Zett. Ins. Lapp. 298, 12. Typhlocyba elegantula, Herr.-Schæff. Nom. Ent. 68. Lapland.

# ©3. TYPHLOCYBA DISCICOLLIS.

Typhlocyba discicollis, Herr.-Schæff. Faun. exxiv. 8. Nom. Ent. 68. Burm. Gen. Typhl. Germany.

## a a. Elytra in apice non limbata.

b. Elytra areolis apicalibus quatuor parallelis, prima in ipso margine externo minutissima, secunda a margine rectangula. Burm. Gen. Typhl. pl. f. 7.

c. Alæ limbatæ.

d. Areolis apicalibus duabus.

### O4. Typhlocyba aureola.

Ocicada aureola, Fall. Act. Holm. xxvii. 1806, 25, 20. Hem. Suec. Cic. 23.

Typhlocyba chlorophana, Panz. Faun. Ins. Germ. exxiv. 9. Iassus aureolus, Ahrens, Faun. Ins. xvii. pl. 20. Typhlocyba aureola, Herr.-Schæff. Nom. Ent. 68. Europe.

#### 5. TYPHLOCYBA CITRINELLA.

Cicada citrinella, Zett. Faun. Lapp. i. 536, 36.
Typhlocyba citrinella, Herr.-Schaff. Faun. exxiv. 7.
Cicadula citrinella, Zett. Ins. Lapp. 299, 13.
Sweden.

# 6. Typhlocyba gracilis.

Cicadula gracilis, Zett. Ins. Lapp. 299, 14.
 Cicadula citrinella, Var.?
 Lapland.

## 7. TYPHLOCYBA MICANTULA.

Cicadula micantula, Zett. Ins. Lapp. 299, 15. Typhlocyba micratula, Burm. Gen. Typhl. Lapland.

d d. Areola apicali una. Burm. Gen. Typhl. pl. f. 9, h.

## © 8. TYPHLOCYBA VIRIDULA.

Typhlocyba viridula, Burm. Gen. Typhl.

Cicada viridula, Fall. Act. Holm. xxvii. 1806, 37, 40. Hem. Suec.

Cic. 53, 47.

Europe.

### 9. Typhlocyba flavescens.

Cicada flavescens, Fabr. Ent. Syst. iv. 46, 85. Syst. Rhyn. 79, 85. Fall. Act. Holm. xxvii. 1806, 35, 36.

Europe.

c c. Alæ non limbatæ, areolis apicalibus duabus. Burm. Gen. Typhl. pl. f. 5, h.

#### O10. Typhlocyba Blandula.

Typhlocyba blandula, Herr.-Schaff. Nom. Ent. 68. Burm. Gen. Typhl.

Cicada blandula, Rossi, Faun. Etrusc. ii. 217, 1263. Fall. Act. Holm. xxvii. 1806, 49, 42. Hem. Suec. Cic. 57, 56.

Cicada gracilis, Schellenberg.

Typhlocyba Quercûs, Panz. Faun. Ins. Germ. cxxiv. 7.

Eupteryx flammigera, Curt. Brit. Ent. 640, 2.

a, b. England. Presented by F. Walker, Esq. c. ——?

### 1. TYPHLOCYBA TILIÆ.

Typhlocyba Tiliæ, Herr.-Schæff. Nom. Ent. 68. Burm. Gen. Typhl. Cicada Tiliæ, Geoffr. Ins. i. 426, 24. Fall. Act. Holm. xxvii. 1806, 42, 47. Hem. Suec. Cic. 57, 55.

Phlogospila, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 229, 492. Europe.

### 12. TYPHLOCYBA HYPERICI.

Typhlocyba Hyperici, Burm. Gen. Typhl. Germany.

### O 13. TYPHLOCYBA 10-PUNCTATA.

Typhlocyba 10-punctata, Herr.-Schæff. Faun. exxiv. 5. Nom. Ent. 68. Burm. Gen. Typhl.

O Cicada 10-punctata, Fall. Act. Holm. xxvii. 1806, 46,41. Hem. Suec. Cic. 42. Zett. Faun. Lapp. i. 539,41.

© Cicadula 10-punctata, Zett. Ins. Lapp. 300, 21. © Eupteryx 6-notata? Curt. Brit. Ent. 640, 10.

Europe. Europe. Europe. Europe.

### 14. Typhlocyba scutellaris.

Typhlocyba scutellaris, Burm. Gen. Typhl. Germany.

bb. Elytra areolis apicalibus quatuor, secunda a margine externo triangularis petiolata; angulus elytrorum internus apicalis modo rotundatus, modo protractus. Burm. Gen. Typhl. pl. f. 5, g.; 5\*, 5\*\*.

#### ccc. Alæ non limbatæ.

d d d. Areolis alarum apicalibus tribus. Burm. Gen. Typhl. pl. f. 8.

#### O15. TYPHLOCYBA ROSÆ.

Typhlocyba Rosæ, Herr.-Schæff. Faun. exxiv. 1. Nom. Ent. 67.

Burm. Gen. Typhl.

Cicada Rosæ, Linn. Syst. Nat. 712, 50. Faun. Suec. 902. Reaum. Ins. v. pl. 20, f. 10—14. Deg. Ins. iii. 103, 9. Geoff. Ins. Par. i. 428, 28. Frisch. Ins. ii. 13, pl. 20. Fuessli, Ins. Helv. 24, 467. Fabr. Sp. Ins. ii. 327, 40. Mant. Ins. ii. 272, 53. Gmel. Ed. Syst. Nat. i. 4, 2115, 50. Berk. Syn. i. 113. Stew. El. Nat. Hist. ii. 98. Turt. Syst. Nat. ii. 598. Zett. Faun. Lapp. i. 538, 39.

Cicadula Rosæ, Zett. Ins. Lapp. 300, 18.

Xanthapala, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 233, 501.

a, b. Scotland. Presented by R. N. Greville, Esq.
c—h. England. Presented by F. Walker, Esq.

## 216. Typhlocyba pulchella.

Typhlocyba pulchella, Herr.-Schaff. Nom. Ent. 67. Faun. exxiv.

10, b. Burm. Gen. Typhl.

Pentastigmops? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 226, 486. Cicada pulchella, Fall. Act. Holm. xxvii. 1806, 36, 38. Hem. Suec. Cic. 55, 51. Zett. Faun. Lapp. i. 540, 42.

Cicadula pulchella, Zett. Ins. Lapp. 301, 22. Eupteryx ornatipennis, Curt. Brit. Ent. 640, 4. Typhlocyba ornatipennis, Burm. Gen. Typhl.

Tettigonia concinna? Ahrens, Faun. Ins. xiv. pl. 12.

Acrostigmus? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 226, 485. Typhlocyba lutea? Hardy, Proc. Tyne. Nat. Field-Club, 1, 418, 4.

a, b. Scotland. Presented by R. N. Greville, Esq.
c. Scotland. Presented by E. Doubleday, Esq.
d, e. Scotland. Presented by J. Hardy, Esq.
f, g. England. Presented by J. C. Dale, Esq.
h—k. England. Presented by F. Walker, Esq.
l, m. Sweden.

## 17. Typhlocyba Germari.

O Cicadula Germari, Zett. Ins. Lapp. 301, 23. Lapland.

©18. TYPHLOCYBA STELLULATOR.

Typhlocyba stellulator, Burm. Gen. Typhl. Germany.

19. TYPHLOCYBA ADSPERSA.

Typhlocyba adspersa, Burm. Gen. Typhl. Germany.

## 20. TYPHLOCYBA VITTATA.

O Cicada vittata, Fall. Act. Holm. xxvii. 1806, 39, 43. Hem. Suec. Cic. 56, 53, Zett. Faun. Lapp. i. 538, 38. Germ. Mag. Ent. iv. 73. 28. Faun. vi. pl. 20. Burm. Handb. Ent. ii. 1, 107, 3.

Typhlocyba vittata, Herr.-Schaff. Nom. Ent. 68. Burm. Handb.

Ent. ii. 1, 107, 3.

O Cicadula vittata, Zett. Ins. Lapp. 299, 17.

Chloroplegma, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 230, 493.

DEupteryx notata, Curt. Brit. Ent. 640, 1.

- Typhlocyba quadrisignata, Hardy, Proc. Tyne. Nat. Field-Club. i. 418, 5.
  - a. England. Presented by F. Walker, Esq. b. Scotland. Presented by E. Doubleday, Esq.

c, d. Scotland. Presented by J. Hardy, Esq.

e, f. Sweden.

# O 21. TYPHLOCYBA AURATA.

Typhlocyba aurata, Herr.-Schaff. Nom. Ent. 68. OCicada aurata, Linn. Syst. Nat. ii. 711, 48. Faun. Suec. 899. Fall. Act. Holm. xxvii. 1806, 39, 44. Hem. Suec. Cic. 40. Fabr. Sp. Ins. ii. 328, 41. Mant. Ins. ii. 273, 55. Ent. Syst. iv. 45, 80. Syst. Rhyn. 78, 80. Fuessli, Ins. Helv. 24, 466. Gmel. Ed. Syst. Nat. i. 4, 2114, 48. Turt. Syst. Nat. ii. 598. Cicada picta, Fabr. Ent. Syst. iv. 42, 67. Syst. Rhyn. 57, 75.

Tettigonia picta, Germ. Mag. Ent. iv. 29. Panz. Faun. Ins. Germ.

cxii. 23. Cicada nigropunctata? Schr. Ins. Austr. 259, 499.

a, b. Sweden.

d d d d. Areolis alarum apicalibus duabus. Burm. Gen. Typhl. pl. f. 5, g. et h.

## 22. TYPHLOCYBA QUERCUS.

Typhlocyba Quercus, Herr.-Schaff. Nom. Ent. 68. Faun. exxiv. 7.

Cicada flammigera, Fourcr. Ins. 190, 24. Geoff. Ins. 426, 24.

Cicada Quercus, Fabr. Sp. Ins. ii. 328, 44. Mant. Ins. ii. 273, 59.

Ent. Syst. iv. 47, 88. Syst. Rhyn. 79, 89. Gmel. Ed. Syst.

Nat. i. 4, 2115, 178. Fall. Act. Holm. xxvii. 1806, 42, 48.

Hem. Suec. Cic. 56, 54.

Flammigera, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 230, 495.

a. Scotland. Presented by J. Hardy, Esq.
b-g. England. Presented by F. Walker, Esq.

## 23. Typhlocyba Nitidula.

Cicada nitidula, Fabr. Ent. Syst. iv. 46, 87. Geoff. Ins. 425, 22. Syst. Rhyn. 79, 88. Herr.-Schæff. Faun. clxiv. 10.

Hypostilba, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 230, 494.
Cicada nitidula? Fabr. Mant. Ins. ii. 273, 57. Gmel. Ed. Syst.
Nat. i. 4, 2114, 176.

a. Scotland. Presented by R. N. Greville, Esq.
b—e. England. Presented by F. Walker, Esq.

# 24. Typhlocyba Tenerrima.

Typhlocyba tenerrima, Burm. Gen. Typhl. Germany.

# 25. Typhlocyba Geometrica.

Typhlocyba geometrica, Burm. Gen. Typhl.
Cercopis geometrica, Schrank, Faun. Boic. ii. 57, 1076.
Cicada lineatella, Fall. Act. Holm. xxvii. 1806, 36, 37. Hem. Suec.
Cic. 55, 51. Zett. Faun. Lapp. i. 539, 40.

Tettigonia geometrica, Ahrens, Faun. Ins. xii. pl. 18.

Cicadula lineatella, Zett. Ins. Lapp. 300, 19.

Typhlocyba lineatella, Herr.-Schaff. Nom. Ent. 68.

Europe.

c c c c. Alæ limbatæ, areola apicali una; elytra areolis apicalibus tribus, prima externa subtriangulari. Burm. Gen. Typhl. pl. f. 9, g, h.

#### C26. TYPHLOCYBA SMARAGDULA.

Cicada smaragdula, Fall. Act. Holm. xxvii. 1806, 37, 39. Zett. Faun. Lapp. i. 535, 33.

Cicadula smaragdula, Zett. Ins. Lapp. 298, 9.

a. ——? Presented by J. G. Children, Esq. b, c. Scotland. Presented by E. Doubleday, Esq. d, e. ——?

## Group ----?

## ©27. TYPHLOCYBA SIGNATIPENNIS.

Typhlocyba signatipennis, Boh. Act. Holm. 1847, 36, 8. Sweden.

# 28. Typhlocyba Quadrinotata.

Cicada quadrinotata, Fabr. Ent. Syst. iv. 43, 71. Syst. Rhyn. 78, 77. Panz. Faun. Germ. ciii. 7. Fall. Hem. Suec. Cic. 46, 35. Germ. Faun. xiv. pl. 15. Zett. Faun. Lapp. i. 532, 27.

Cicada pusilla, Rossi, Faun. Etrusc.

Cicadula quadrinotata, Zett. Ins. Lapp. 296, 1.

Tetrastactus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 225, 484.

a. Scotland. Presented by J. Hardy, Esq.

## 29. TYPHLOCYBA PICTA.

Typhlocyba picta, Burm. Handb. Ent. ii. 107, 2.

OCicada picta, Fabr. Ent. Syst. iv. 42, 67. Syst. Rhyn. 77, 75. Herr.-Schaff. Faun. cxii. 23.

Cicada Carpini Fourc. Ins. 191. Vill. Ent. i. 469, 44. Geoff. Ins. 426, 25.

CEupteryx picta, Curtis, Journ. Roy. Agric. Soc. Engl. 1849, x. f. 32.

Typhlocyba, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 223, 481.

a. Scotland. Presented by E. Doubleday, Esq.
b, c. Scotland. Presented by J. Hardy, Esq.
d. England. Presented by F. Walker, Esq.

e, f. Sweden.

# 30. Typhlocyba Urticæ.

Cicada Urticæ, Fabr. Syst. Rhyn. 77, 76. Fall. Act. Holm. xxvii. 1806, 40, 45, Hem. Suec. Cic. 50, 41. Herr.-Schæff. Faun. cxxiv. 4.

Cicadula Urticæ, Zett. Ins. Lapp. 299, 16.

Eupteryx hortensis, Curt. Ent. Mag. i. 192. Brit. Ent. 640, 5.

Eupteryx tarsalis, Curt. Brit. Ent. 640, 6. Eupteryx Melissæ, Curt. Brit. Ent. 640, 7.

- Typhlocyba octonotata, Hardy, Proc. Tyne. Nat. Field-Club, i. 419, 6.
- Typhlocyba sexmaculata, Hardy, Proc. Tyne. Nat. Field-Club, i. 421, 7.

Typhlocyba jucunda, Hardy, Proc. Tyne, Nat. Field-Club, i. 421, 8.

Typhlocyba Stachydearum, Hardy, Proc. Tyne. Nat. Field-Club, i. 422, 9,

a, b. Scotland. Presented by E. Doubleday, Esq. c—e. Scotland. Presented by J. Hardy, Esq. f—i. England. Presented by F. Walker, Esq. Sweden.

#### 31. Түрн сүва 7- потата.

O Cicada 7-notata, Fall. Act. Holm. xxvii. 1806, 35, 35.

Cicadula 7-notata, Zett. Faun. Lapp. i. 534, 31. Ins. Lapp. 297, 6.

## . 32. TYPHLOCYBA FASCIATA.

DEupteryx fasciata, Curt. Brit. Ent. 640, 3.

a. England.

## 33. TYPHLOCYBA VIRIDIPES.

©Eupteryx viridipes, Curt. Brit. Ent. 640, 9.

a. Scotland. Presented by E. Doubleday, Esq.

## O 34. Typhlocyba maculipennis.

Eupteryx maculipennis, Curt. Brit. Ent. 640, 11.

a. England.

## 35. Typhlocyba Solani.

Eupteryx Solani, Curtis, Journ. Roy. Agric. Soc. Engl. 1849, x. f. 28-31. Ruricola, Gard. Chron. i. 388. England.

O 36. TYPHLOCYBA CLYPEATA.

Eupteryx clypeata, Curt. Brit. Ent. 640, 12. England.

## 37. Typhlocyba plagiata.

Typhlocyba plagiata, Hardy, Proc. Tyne. Nat. Field-Club. i. 416, 1.

a, b. Scotland. Presented by R. N. Greville, Esq.

### ©38. Typhlocyba eximia.

Typhlocyba eximia, Hardy, Proc. Tyne. Nat. Field-Club, i. 417, 2. a. Scotland. Presented by J. Hardy, Esq.

# O39. Typhlocyba Dahlbomi.

Cicadula Dahlbomi, Zett. Ins. Lapp. 297, 7. Lapland.

### 640. Typhlocyba tenella.

Cicada tenella, Fall. Act. Holm. xxvii. 1806, 43, 50. a-c. Sweden.

## O41. TYPHLOCYBA SPRETA.

Ocicadula spreta, Zett. Ins. Lapp. 298, 11. Sweden.

# C42. Typhlocyba vitrea.

Cicada vitrea, Fabr. Syst. Rhyn. 79, 90. Classus vitrius, Germ. Mag. Ent. iv. 85, 15.

a, b. England. Presented by F. Walker, Esq.

## 43. TYPHLOCYBA ALBOSTRIELLA.

Typhlocyba albostriella, Herr.-Schaff. Faun. clxiv. 11. Phlogotænia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 231, 496. South France. Italy.

## 44. Typhlocyba Vitis.

O Tettigonia vitis, Harris, Encycl. Amer. Art. Locust, 1831, viii. 43, Ins. New Engl. 184. Fessenden, New Amer. Gardener, 299. United States.

### O 45. TYPHLOCYBA FABÆ.

Tettigonia Fabæ, Harris, Ins. New Engl. 185. United States.

#### €46. TYPHLOCYBA TRICINCTA.

Erythroneura tricincta, Fitch, The Senate, No. 30, 63.

a. New York. From Dr. Fitch's collection.

## 7. TYPHLOCYBA OBLIQUA.

Tettigonia obliqua, Say, Journ. Acad. Nat. Sci. iv. 342.

a. New York. From Dr. Fitch's collection.

## ○48. TYPHLOCYBA TRICOLOR.

Ferruginea, subtus alba; caput flavum, nigro fasciatum; thorax albo varius; abdominis dorsum nigrum; alæ anticæ cupreo-fuscæ, ad costam limpidæ; alæ posticæ cinereæ.

Body white beneath: head a little narrower than the chest, semicircular along the fore border, slightly concave behind; crown yellow, with a broad black irregular band, which is partly widened to the borders, and is interrupted by a slender yellow stripe; face conical: shield ferruginous, blackish along the fore border, whitish towards the hind border; scutcheon pale ferruginous, with four white spots, and with a white tip: back of the abdomen mostly

black: legs white: fore-wings coppery-brown, with paler spots on some of the areolets; fore border colourless, with two dark brown spots, one in the middle, the other at the tip; three brown dots along the hind border: hind-wings gray. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

a. Port Natal.

## 49. TYPHLOCYBA MARGINATA.

Fusca, subtus alba; caput flavum, albo vittatum; thorax albo et luteo vittatus; abdomen supra nigrum; alæ anticæ cervinæ, apice fuscæ, ad costam limpidæ; alæ posticæ subcinereæ.

Body white beneath: head a little narrower than the chest, conical along the fore border, slightly concave behind; crown yellow, triangular, hardly broader than long, with a white stripe, which tapers from the hind border to the front; chest brown, with a broad white stripe, which is inlaid with a luteous stripe: abdomen black above: legs white: fore-wings fawn-colour, with brown tips; fore border colourless, with a brown stripe along one-fourth of the length from the base, and with a brown oblique streak in the middle: hind-wings pale gray. Length of the body  $1\frac{3}{4}$  line; of the wings 4 lines.

a. South Africa. Presented by Dr. A. Smith.

# 6 50. Typhlocyba? Stactopeltus.

OStactopeltus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 228, 490. France.

### 51. TYPHLOCYBA? PYROTÆNIA.

Pyrotænia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 224, 482. France.

# O 52. TYPHLOCYBA? IEDIDIA.

O Iedidia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 228, 489. France.

### ○ 53. TYPHLOCYBA? HYPOSTICTA.

Hyposticta, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 228, 491. France.

## 54. TYPHLOCYBA? CISTOCEPHALA.

Cistocephala, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 232, 498. France.

## ○ 55. TYPHLOCYBA? EPIMELTIA.

Epimeltia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 227, 487. a. France.

# 56. TYPHLOCYBA? CHLOAPALA.

Chloapala, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 231, 497. France.

# O 57. TYPHLOCYBA? PELTOSPILA.

Peltospila, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 232, 499. France.



# LIST

OF

# HOMOPTEROUS INSECT

### Order II. PHYTOPHTHIRES.

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Aphidii, Fonscolombe.

Sternorhynchi.—Fam. 1. Phytophthires. Tribe 1. Hym 2. Scytinelytres. Fam. 2. Phytathelges. Tribe 1. —2. Gallinsectes.—Amyot et Serv. Hist. Nat. Hér 613, 618, 625.

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## Fam. 1. PSYLLIDÆ.

Psyllidæ, Latr., Blanch., Westw., Curt.
Psyllodes, p., Hartig.
Psyllodes, Burm., Handb. Ent. ii. 1, 95.
Race Saltipedes, Group Psyllides, Amyot et Serv. Hist.
590.

### Genus 1. LIVIA.

Livia, Latr. Hist. Nat. Ins. xii. 374. Gen. Crust. iii. 170, 399, 1-Leach, Samou., Curt., Dahlbom, Burm., Ahrens, Zett., Hartig, Blanch., Amyot et Serv., Erichson, Foerster.

Chermes, p., Schrank.

Dariphia, Illiger, Mag. ii. 284.

Psylla, p., Latr., Haworth.

Psylla, p., Fallen.

3 L

#### 1. LIVIA JUNCORUM.

ici, Baiersch. Flor. 558. Schrank, Faun. Boic. ii. 1, 52.

um, Latr. Hist. Nat. Crust. &c. xii. 374. Gen. Crust.
), 1, 399, 1, pl. 12, f. 1. Leach, Edin. Enc. ix. 125.
Comp. 232, pl. 5, f. 11. Haworth, Ent. Trans. i. 252.
fag. i. 284. Curt. Brit. Ent. 492. Burm. Handb. Ent.
7, 1. Dahlb. Scand. Ins. 132. Zett. Ins. Lapp.
32, 1. Blanch. Hist. Nat. Ins. 1, 418. Amyot et Serv.
at. Hém. 596, 1. Foerster, Psyll. Verh. Nat. Ver. Preuss.
1848, 3, 91.

corum, Latr. Bull. Soc. Philomat. 1. Hist. Nat. des

s, 322, pl. 12, f. 3.

incorum, Illig. Mag. i. 284. ot, Ann. Soc. Ent. Fr. 2me Série, v. 462, 515.

and. Presented by F. Walker, Esq.

End addan.

#### 2. LIVIA VERNALIS.

lis, Fitch, The Senate, No. 30, 64.

### 3. LIVIA FEMORALIS.

ralis, Fitch, The Senate, No. 30, 64.

## 4. LIVIA PALUDUM.

Livia Faiudum, Foerster, MSS. Var. Juncorum?

a. Prussia. Presented by F. Walker, Esq.

#### 5. LIVIA LONGIPENNIS.

Rufa; antennæ corpore paullo breviores, apice nigræ; abdomen subtus flavum; alæ anticæ longæ, fuscæ, maculis sublimpidis ornatæ; alæ posticæ subcinereæ.

Red: head flat above, with two tawny and slightly hairy lobes in front: feelers slender, slightly setaceous, a little shorter than the body, black towards the tips; first and second joints stout, short;

first much thicker than the second, and about twice its length; third and following long, successively decreasing in length; tenth spindle-shaped, terminating in a bristle: abdomen yellow beneath: fore-wings brown, with a few almost colourless spots; brand red, narrow, nearly half the length of the wing; veins ferruginous; upper fork at three-fifths of the length of the wing, its lower branch slightly undulating; lower fork about the middle of the wing, its upper fork full thrice the length of the lower: hind-wings slightly gray. Length of the body  $2\frac{1}{2}$  lines; of the wings 7 lines.

a. Van Diemen's Land. From Mr. Shuckard's collection.

#### Genus 2. DIRAPHIA.

Diraphia, Waga, Ann. Soc. Ent. Fr. xi. 275. Guér. Amyot et Serv. Hist. Nat. Hém. 596.

#### 1. DIRAPHIA LIMBATA.

Diraphia limbata, Waga, Ann. Soc. Ent. Fr. xi. 275. Guér. Icon. Règ. Anim. 1842, 293. Amyot et Serv. Hist. Nat. Hém. 597. Diraphia, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 462, 515. Poland.

### Genus 3. LIVILLA.

Livilla, Curt. Brit. Ent. 625. Foerster. Psylla, p., Klug, Waltl., Germ.

## 1. LIVILLA ULICIS.

Livilla Ulicis, Curt. Brit. Ent. 625. Foerster, Psylloden, Verhandl. Naturhist. Vereins der Preuss. Rheinlande, 1848, 3, 68, 1. Psylla coleoptrata, Klug, Isis, 1837, 277. Waltl. Germ. Zeit. Ent. i. 365.

Psylla Genistæ, Germ.

a-c. England. Presented by J. C. Dale, Esq.

d. France.

e. Prussia. Presented by F. Walker, Esq.

### Genus 4. ARYTAINA.

Chermes, p., Linn., Fabr., Gmel., Berk., Stew.

Psylla (Section 3), Hartig.

Arytaina, Foerster, Psylloden, Verhandlungen des Naturhistorischen Vereins der Preussischen Rheinlande, 1848, 67.

Psylla, p., Hartig.

3 L 2

#### 1. ARYTAINA SPARTII.

Arytaina Spartii, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl' 1848, 3, 69.

Psylla Spartii, Hartig, Germ. Zeitsch. Ent. iii. 375, 9.

Psylla Ulicis, Curt. Brit. Ent. 565, 22, a.

a—d. England. Presented by F. Walker, Esq.
e. South of France. Presented by F. Walker, Esq.
f, g. Prussia. Presented by F. Walker, Esq.
h, i. Prussia. Presented by E. Doubleday, Esq.
j. ——? Presented by E. Doubleday, Esq.

#### 2. ARYTAINA RADIATA.

Arytaina radiata, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 70.

Prussia.

#### Genus 5. PSYLLA.

Psylla, p., Geoff. Ins. Par. i. 484. Latr., Burm.

Chermes, p., Linn., Fabr., Deg., Schrank, Gmel., Berk., Stew., Turt., Kirby & Spence, Hartig, Zeit.

Psylla (Section 1), Hartig, Germ. Ent. Zeit. iii. 373.

Psylla, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 67.

## 1. PSYLLA ALNI.

Psylla Alni, Geoff. Ins. Par. i. 486, 3. Latr. Gen. Crust. iii. 169, 398, 1. Leach, Edin. Enc. ix. 125. Samou. Comp. 231. Burm. Handb. Ent. ii. 1, 98, 1. Foerster, Psyll. Verh. Nat.

Ver. Preuss. Rheinl. 1848, 3, 70, 1.

Chermes Alni, Linn. Faun. Succ. 1008. Syst. Nat. i. 2, 738, 10. Fabr. Sp. Ins. ii. 391, 12. Mant. Ins. 318, 12. Ent. Syst. iv. 222, 12. Syst. Rhyn. 305, 12. Deg. Ins. iii. 96, 3, pl. 10, f. 8. Frisch. Ins. viii. 28, pl. 13. Sulz. Ins. pl. 12, f. 80. Schæff. Elem. pl. 39. Hartig, Germ. Zeit. Ent. iii. 373. Gmel. Ed. Syst. Nat. i. 4, 2212, 10. Schrank, Faun. Boic. ii. 1, 140, 1245. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 711. Shaw, Gen. Zool. vi. 186, f. 3. Zett. Faun. Lapp. i. 556, 8. Ins. Lapp. 309, 8.

Clethropsylla, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 459.

a-d. England. Presented by F. Walker, Esq.

e, f. ----?

g, h. Prussia. Presented by E. Doubleday, Esq.

i, j. Prussia. Presented by F. Walker, Esq.

#### 2. PSYLLA FUSCINERVIS.

Psylla fuscinervis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 70, 2.

Prussia.

#### 3. PSYLLA BUXI.

Chermes Buxi, Linn. Syst. Nat. ii. 738, 7. Fabr. Sp. Ins. ii. 391, 5. Mant. Ins. ii. 317, 5. Ent. Syst. iv. 221, 5. Syst. Rhyn. 304, 5. Gmel. Ed. Syst. Nat. i. 4, 2212, 7. Réaum. Ins. iii. pl. 19, f. 1—14. Stew. El. Nat. Hist. ii. 112. Shaw, Gen. Zool. vi. 187, pl. 59, f. inf. Wood, Ill. Linn. Gen. i. 114, pl. 40.

Psylla viridis, &c., Geoff. Ins. Par. i. 485, 2.

Psylla Buxi, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 71, 3.

a. Scotland. Presented by E. Doubleday, Esq. b, c. England. Presented by F. Walker, Esq,

### 4. PSYLLA VISCI.

Psylla Visci, Curt. Brit. Ent. 565, 5, a. Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 71, 4.

Europe.

## 5. PSYLLA ULMI.

Psylla Ulmi, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 71, 5.

Chermes Ulni, Linn. Syst. Nat. i. 2, 737, ii. 737, 4. Faun. Suec. 1002. Fabr. Sp. Ins. ii. 390, 2. Mant. Ins. 317, 2. Ent. Syst. iv. 221, 2. Syst. Rhyn. 303, 2. Gmel. Ed. Syst. Nat. i. 4, 2211, 2. Schrank, Faun. Boic. ii. 1, 141, 1250. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710.

a. Prussia. Presented by F. Walker, Esq.

#### 6. PSYLLA VIRIDIS.

Psylla cratægicola, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 72, 6.

Psylla viridis, Hartig, Germ. Ent. Zeit. iii. 374, 3.

a, b. England. Presented by F. Walker, Esq.

c. \_\_\_\_?

Presented by F. Walker, Esq.

e, g. Prussia. Presented by E. Doubleday, Esq.

#### 7. PSYLLA MALI.

Psylla Mali, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 72, 8.

Chermes Mali, Schmidberger, Kollar, Treatise on Injurious Insects, Translated, 278.

a-f. England. Presented by F. Walker, Esq.

#### 8. PSYLLA CARPINI.

Psylla Carpini, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 72, 9.

Prussia.

### 9. PSYLLA DUBIA.

Psylla dubia, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 73, 10.

Prussia.

## 10. PSYLLA FRAXINICOLA.

Psylla fraxinicola, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 73, 11.

Prussia.

## 11. PSYLLA HIPPOPHAES.

Psylla Hippophaës, Von Heyden, MSS. Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3.

a, b. Prussia. Presented by F. Walker, Esq.

### 12. PSYLLA ---?

Psylla viridula, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 74, 13.

a. England. Presented by F. Walker, Esq.

#### 13. PSYLLA PEREGRINA.

Psylla peregrina, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 74, 14.

a, b. Prussia. Presented by F. Walker, Esq.

#### 14. PSYLLA INSIGNIS.

Psylla insignis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 74, 15.

Prussia.

#### 15. PSYLLA AMBIGUA.

Psylla ambigua, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 74, 16.

Prussia.

### 16. PSYLLA MELANONEURA.

Psylla melanoneura, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 75, 17.

Prussia.

### 17. PSYLLA SPARTIOPHILA.

Psylla spartiophila, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 75, 18.

a, b. Prussia. Presented by F. Walker, Esq.

## 18. PSYLLA CRATÆGI.

Chermes Cratægi, Scopoli, Ent. Carn. 139, 412. Gmel. Ed. Syst. Nat. i. 4, 2214, 24. Schrank, Faun. Boic. ii. 1, 142, 1255. Stew. El. Nat. Hist. ii. 112.

Psylla Cratægi, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl 1848, 3, 75, 19.

a-d. England. Presented by F. Walker, Esq.

#### 19. PSYLLA COSTATO-PUNCTATA.

Psylla costato-punctata, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 76, 20.

a. Prussia. Presented by F. Walker, Esq.

#### 20. PSYLLA RUFULA.

Psylla rufula, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 76, 21.

Prussia.

#### 21. PSYLLA FUMIPENNIS.

Psylla fumipennis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 76, 22.

Prussia.

#### 22. PSYLLA PRUNI.

Chermes Pruni, Scopoli, Ent. Carn. 140, 414. Gmel. Ed. Syst. Nat. i. 4, 2214, 23. Schrank, Faun. Boic. ii. 1. 142, 1254. Stew. El. Nat. Hist. ii. 112.

Psylla Pruni, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 77, 23.

Europe.

#### 23. PSYLLA PYRI.

Psylla Pyri, Stephens, Curt. Brit. Ent. 565, 5. Burm. Handb. Ent. ii. 1, 98, 2. Knight, Hort. Trans. Ser. 2, ii. 107. Loudon's Gardener's Mag. 92, 1837, 525. Ruricola, Gard. Chron. ii. (1842), 156. Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848. 3.

Chermes Pyri, Linn. Syst. Nat. i. 2, 737, 4. Faun. Suec. 1004.

Fabr. Sp. Ins. ii. 390, 3. Mant. Ins. ii. 317, 3. Ent. Syst. iv. 221, 3. Syst. Rhyn. 303, 3. Deg. Ins. iii. 91, 2. pl. 9, f. 1, 16. Schrank, Faun. Boic. ii. 1, 142, 1253. Gmel. Ed. Syst. Nat. i. 4, 2211, 4. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710. Shaw, Gen. Zool. vi. 187, pl. 59, f. sup. Schmidberger, Kollar, Treatise on Injurious Insects, Trans. 275.

Apiopsylla, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 459.

a-d. England. Presented by F. Walker, Esq.
e-i. Scotland. Presented by E. Doubleday, Esq.

### 24. PSYLLA PYRICOLA.

Psylla pyricola, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 77, 25.

Germany.

### 25. PSYLLA APIOPHILA.

Psylla apiophila, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 78, 26.

a. England. Presented by J. C. Dale, Esq. b, c. Prussia. Presented by F. Walker, Esq.

### 26. PSYLLA PYRISUGA.

Psylla pyrisuga, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 78, 27.

a. Prussia. Presented by F. Walker, Esq.

## 27. PSYLLA SALICIS.

Chermes Salicis, Linn. Syst. Nat. ii. 739, 14. Faun. Suec. 1012. Fabr. Sp. Ins. ii. 392, 14. Mant. Ins. ii. 318, 14. Ent. Syst. iv. 223, 14. Syst. Rhyn. 305, 14. Gmel. Ed. Syst. Nat. i. 4, 2213, 14. Schrank, Faun. Boic. ii. 1, 140, 1247. Stew. El. Nat. Hist. ii. 112. Turt. Syst. Nat. ii. 711.

Psylla Saliceti, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl.

1848, 3, 79, 28.

a, b. England. Presented by F. Walker, Esq.

c. Prussia. Presented by the Entomological Club.

d. ——?

# 28. PSYLLA FERRUGINEA.

Psylla ferruginea, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 79, 29.

a. England. Presented by F. Walker, Esq.

b. Prussia. Presented by E. Doubleday, Esq.
c. Prussia. Presented by F. Walker, Esq.

## 29. PSYLLA SIMULANS.

Psylla simulans, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 80, 30.

Prussia.

### 30. PSYLLA FRAXINI.

Psylla Fraxini, Curt. Brit. Ent. 565. Hartig, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 80, 31.

Chermes Fraxini, Linn. Syst. Nat. ii. 739, 15. Faun. Suec. 1013. Fabr. Sp. Ins. ii. 392, 15. Mant. Ins. ii. 318, 15. Ent. Syst. iv. 223, 15. Syst. Rhyn. 305, 15. Gmel. Ed. Syst. Nat. i. 4, 2313, 15. Schrank, Faun. Boic. ii. 1, 141, 1248. Berk. Syn. i. 122. Stew. El. Nat. Hist. ii. 112. Turt. Syst. Nat. ii. 711. Kirby and Spence, Intr. Ent. pl. 28, f. 18.

a—d. England. Presented by F. Walker, Esq.
e. Scotland. Presented by E. Doubleday, Esq.
f, g. Prussia. Presented by E. Doubleday, Esq.
h, i. Prussia. Presented by F. Walker, Esq.

# 31. PSYLLA HEYDENI.

Psylla Heydeni, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 81, 32.

a. Prussia. Presented by F. Walker, Esq.

# 32. PSYLLA ALPINA.

Psylla alpina, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 81, 33.

Bernese Alps.

# 33. PSYLLA PICTA.

Psylla picta, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 81, 34.

England.

### 34. PSYLLA SUBGRANULATA.

Psylla subgranulata, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 94.

South of France.

### 35. PSYLLA ARGYROSTIGMA.

Psylla argyrostigma, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 97, 4.

Germany.

### 36. PSYLLA ALATERNI.

Psylla Alaterni, Haliday, MSS. Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 97, 5.

a. Ireland. Presented by A. H. Haliday, Esq.

### 37. PSYLLA ÆRUGINOSA.

Psylla æruginosa, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 97, 6.

Ireland.

# 38. PSYLLA OCCULTA.

Psylla occulta, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 98, 7.

a. England. Presented by F. Walker, Esq.

# 39. PSYLLA FUSCIPES.

Psylla fuscipes, Hartig, Germ. Ent. Zeit. iii. 374. Germany.

# 40. PSYLLA BETULÆ.

Chermes Betulæ, Linn. Syst. Nat, ii. 738, 9. Faun. Suec. 1007. Fabr. Sp. Ins. ii. 391, 11. Mant. Ins. 318, 11. Ent. Syst. iv. 222, 11. Syst. Rhyn. 305, 11. Gmel. Ed. Syst. Nat. i. 4, 2212. Stew. El. Nat. Hist. ii. 112. Turt. Syst. Nat. ii. 711.

a-e. Scotland. Presented by E. Doubleday, Esq.

### 41. PSYLLA GRAMINIS.

Chermes Airæ-flexuosæ, Linn. Syst. Nat. ii. 737, 1. Faun. Suec. 1001.

Chermes graminis, Fabr. Sp. Ins. ii. 390, 1. Mant. Ins. ii. 317, 1. Ent. Syst. iv. 221, 1. Syst. Rhyn. 303, 1. Gmel. Ed. Syst. Nat. i. 4, 2211, 2. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710.

a. ——?

## 42. PSYLLA NIGRITA.

Chermes nigrita, Zett. Faun. Lapp. i. 556, 9. Ins. Lapp. 309, 9. Lapland.

### 43. PSYLLA PULCHRA.

Chermes pulchra, Zett. Ins. Lapp. 309, 10. Lapland.

### 44. PSYLLA ELEGANTULA.

Chermes elegantula, Zett. Ins. Lapp. 310, 11. Lapland.

Note.—The following species may not belong to the genus Psylla as it is defined by Foerster.

# 45. PSYLLA SUBFASCIATA.

Psylla subfasciata, *Erichson*, *Arch.* 1842, i. 286. Van Diemen's Land.

# 46. PSYLLA LUTEOLA.

Psylla luteola, Erichson, Arch. 1842, i. 286. Van Diemen's Land.

# 47. PSYLLA? CERASTII.

Chermes Cerastii, Linn. Syst. Nat. ii. 737, 3. Faun. Suec. 1003. Fabr. Sp. Ins. ii. 390, 4. Mant. Ins. ii. 317, 4. Ent. Syst. iv. 221, 4. Syst. Rhyn. 303, 4. Gmel. Ed. Syst. Nat. i. 4, 2211, 3. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710.

Europe.

### 48. PSYLLA? SORBI.

Chermes Sorbi, Linn. Syst. Nat. ii. 738, 5. Fabr. Sp. Ins. ii. 391, 7. Mant. Ins. ii. 318, 7. Ent. Syst. iv. 222, 7. Syst. Rhyn. 304, 7. Gmel. Ed. Syst. Nat. i. 4, 2211, 5. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710.

Europe.

### 49. PSYLLA? PERSICE.

Chermes Persicæ, Fabr. Sp. Ins. ii. 391, 8. Mant. Ins. ii. 318, 8. Ent. Syst. iv. 222, 8. Syst. Rhyn. 304, 8. Geoff. Ins. Par. i. 506, 4. Réaum. Ins. iv. pl. 1, f. 1, 2. Gmel. Ed. Syst. Nat. i. 4, 2212, 18. Stew. El. Nat. Hist. ii. 111.

Europe.

### 50. PSYLLA? CALTHÆ.

Chermes Calthæ, Linn. Syst. Nat. ii. 738, 6. Faun. Suec. 1005. Fabr. Sp. Ins. ii. 391, 9. Mant. Ins. ii. 318, 9. Ent. Syst. iv. 222, 9. Syst. Rhyn. 304, 9. Gmel. Ed. Syst. Nat. i. 4, 2212, 6. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710.

Europe.

# 51. PSYLLA? FAGI.

Chermes Fagi, Linn. Syst. Nat. ii. 738, 12. Faun. Suec. 1010. St. Scand. 65. Fabr. Sp. Ins. ii. 391, 6. Mant. Ins. ii. 317, 6. Ent. Syst. iv. 222, 6. Syst. Rhyn. 304, 6. Réaum. Ins. iii. pl. 26, f. 1—6. Gmel. Ed. Syst. Nat. i. 4, 2213, 12. Stew. El. Nat. Hist. ii. 112. Turt. Syst. Nat. ii. 710.

Europe.

# 52. PSYLLA? CASTANEA.

Psylla castanea, Geoff. Ins. Par. i. 489, 8. Chermes castanea, Gmel. Ed. Syst. Nat. i. 4, 2214, 21. Stew. El. Hist. Nat. ii. 112.

France.

PART IV.

# 53. PSYLLA? RUBRA.

Psylla rubra, Geoff. Ins. Par. i. 489, 9. Chermes rubra, Gmel. Ed. Syst. Nat. i. 4, 2214, 22. Stew. El. Nat. Hist. ii. 112.

France.

### 54. PSYLLA? PURPURASCENS.

Psylla (Section 4) purpurascens, Hartig, Germ. Ent. Zeit. iii. 375, 10.

Germany.

### 55. PSYLLA? EUONYMI.

Chermes Euonymi, Scopoli, Ent. Carn. 139, 411. Gmel. Ed. Syst. Nat. i. 4, 2214, 25. Stew. El. Nat. Hist. ii. 112. Carniolia.

### 56. PSYLLA? SENECIONIS.

Chermes Senecionis, Scopoli, Ent. Carn. 140, 413. Gmel. Ed. Syst. Nat. i. 4, 2214, 26. Stew. El. Nat. Hist. ii. 112. Carniolia.

# 57. PSYLLA? LICHENIS.

Psocus?

Chermes lichenis, Geoff. Ins. Par. i. 88, 7. Gmel. Ed. Syst. Nat. i. 4, 2214, 20. Stew. El. Nat. Hist. ii. 112.

France.

# 58. PSYLLA? TRIPUNCTATA.

Psylla tripunctata, Fitch, The Senate, No. 30, 64. New York.

# 59. PSYLLA? QUADRILINEATA.

Psylla quadrilineata, Fitch, The Senate, No. 30, 64. New York. 60. PSYLLA? CARPINI.

Psylla Carpini, Fitch, The Senate, No. 30, 64. New York.

61. PSYLLA? ANNULATA.

Psylla annulata, Fitch, The Senate, No. 30, 64. New York.

62. PSYLLA? URTICÆCOLENS.

Psylla urticæcolens, Fitch, MSS.?

a. New York. From Dr. Fitch's collection.

63. PSYLLA? QUADRISIGNATA.

a. New York. From Dr. Fitch's collection.

64. PSYLLA? QUERCUS.

Chermes Quercûs, Linn. Syst. Nat. ii. 738, 11. Faun. Suec. 1009. Fabr. Syst. Rhyn. 305, 16. Gmel. Ed. Syst. Nat. i. 4, 2212, 11. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 112. Sweden.

65. PSYLLA? ABIETIS.

Psylla (Section 5) Abietis, Hartig, Germ. Ent. Zeit. iii. 375, 11. Germany.

66. PSYLLA? RHAMNI.

Chermes Ramni, Schrank, Faun. Boic. ii. 1, 141, 1249. Bavaria.

67. PSYLLA? HUMULI.

Chermes Humuli, Schrank, Faun. Boic. ii. 1, 141, 1251. Bavaria.

### 68. PSYLLA? LATA.

Ferruginea, lata; antennæ flavæ, submoniliformes, thoracis dimidio breviores, apice fuscæ; pedes fulvi; tibiis flavis; alæ limpidæ, venis flavo fuscoque fasciatis.

Ferruginous, broad, thick: feelers yellow, submoniliform, rather stout, less than half the length of the chest, with brown tips, which have two bristles; joints successively decreasing in length: legs tawny; shanks yellow: wings colourless; fore-wings broad; fore border convex near the base; veins with alternate yellow and brown bands; upper fork at two-thirds of the length of the wing; lower fork in the middle of the length, its petiole extremely short. The breadth of the body and the structure of the feelers and of the fore-wings, distinguish this species from all the groups into which this family has been divided; it is most allied to Rhinocola. Length of the body  $1\frac{1}{4}$  line; of the wings 3 lines.

a, b. Sierra Leone. Presented by the Rev. D. F. Morgan.

### Genus 6. TRIOZA.

Chermes, p., Linn., Fabr., Gmel., Berk., Stew., Turt., Zett.
Psylla, p., Geoff., Hartig, Burm., Web. & Mohr., Loew, Macquart,
Blanch.

Psylla (Section 2), Hartig, Germ. Ent. Zeit. 111, 374. Trioza, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3,67.

# 1. TRIOZA URTICÆ.

Trioza Urticæ, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl.

1848, 3, 82, 1.

Chermes Urticæ, Linn. Syst. Nat. ii. 738, 8. Faun. Suec. 1006. Fabr. Sp. Ins. ii. 391, 10. Mant. Ins. ii. 318, 10. Ent. Syst. iv. 222, 10. Syst. Rhyn. 304, 10. Gmel. Ed. Syst. Nat. i. 4, 2212, 8. Deg. Ins. iii. 134, 1, pl. 9, f. 7—19. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 112. Turt. Syst. Nat. ii. 711. Zett. Faun. Lapp. i. 553, 4. Ins. Lapp. 308, 4.

Psylla Urticæ, Burm. Handb. Ent. ii. 1, 98, 3. Cnidopsylla, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 373.

a—d. England. Presented by F. Walker, Esq.
e, f. Prussia. Presented by E. Doubleday, Esq.
g, h. Prussia. Presented by F. Walker, Esq.

### 2. TRIOZA APICALIS.

Trioza apicalis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 82, 2.

Chermes Cerastii? Linn.

Psylla simplex? Hartig, Germ. Ent. Zcit. iii. 374, 6. Psylla Cerastii, Loew?

a. Prussia. Presented by F. Walker, Esq.

### 3. TRIOZA EUPODA.

Trioza eupoda, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 82, 3.

Psylla eupoda, Hartig, Germ. Ent. Zeit. iii. 374, 8.

Germany.

### 4. TRIOZA PROTENSA.

Trioza protensa, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 82, 4.

Prussia.

# 5. TRIOZA REMOTA.

Trioza remota, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 83, 5.

Prussia.

# 6. TRIOZA CRASSINERVIS.

Trioza crassinervis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 83, 6.

a. Prussia. Presented by F. Walker, Esq.

# 7. TRIOZA CURVATINERVIS.

Trioza curvatinervis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 83, 7.

Prussia.

## 8. TRIOZA ALBIVENTRIS.

Trioza albiventris, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 84, 8.

Prussia.

### 9. TRIOZA PALLIPES.

Trioza pallipes, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 84, 9.

Germany.

### 10. TRIOZA FORCIPATA.

Trioza forcipata, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 84, 10.

Prussia.

### 11. TRIOZA MODESTA.

Trioza modesta, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 84, 11.

Prussia.

# 12. TRIOZA SANGUINOSA.

Trioza sanguinosa, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 85, 12.

Prussia.

# 13. TRIOZA HÆMATODES.

Trioza hæmatodes, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 85, 13.

Germany.

# 14. TRIOZA CINNABARINA.

Trioza cinnabarina, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 85, 14.

Germany.

### 15. TRIOZA NIGRICORNIS.

Trioza nigricornis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 86, 16.

a. Prussia. Presented by F. Walker, Esq.

### 16. TRIOZA PINICOLA.

Trioza pinicola, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 86, 15.

Psylla Pini? Geoff. Ins. Par. i. 488, 6.

Chermes Pini? Linn. Syst. Nat. 736, 25. Faun. Suec. Ed. i. 699. Gmel. Ed. Syst. Nat. i. 4, 2213, 19. Stew. El. Nat. Hist. ii. 112.

Pityopsylla, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 461, 513. a-f. England. Presented by F. Walker, Esq.

## 17. TRIOZA? LARICIS.

Psylla Laricis, Macquart, Recueil Trav. Soc. Sci. Lille, 1819. Cnaphalodes Laricis, Amyot et Serv. Hist. Nat. Hém. 595. Cnaphalodes, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 460, 512. France.

# 18. TRIOZA FEMORALIS.

Trioza femoralis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 86, 17.

Germany.

# 19. TRIOZA ACUTIPENNIS.

Chermes acutipennis, Zett. Faun. Lapp. i. 554, 5. Ins. Lapp. 308, 5.

Trioza acutipennis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 87, 18.

a. Prussia. Presented by F. Walker, Esq.

### 20. TRIOZA GALII.

Trioza Galii, Foerster, Psyll. Verh. Nat. Verh. Preuss. Rheinl. 1848, 3, 87, 19.

a, b. Prussia. Presented by F. Walker, Esq.

### 21. TRIOZA VELUTINA.

Trioza velutina, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 87, 20.

a. England. Presented by F. Walker, Esq.

### 22. TRIOZA ABIETICOLA.

Trioza abieticola, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 88, 21.

a. England. Presented by F. Walker, Esq.

### 23. TRIOZA MUNDA.

Trioza munda, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 88, 22.

Europe.

# 24. TRIOZA WALKERI.

Trioza Walkeri, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 88, 23.

Europe.

# 25. TRIOZA MAURA.

Trioza maura, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 94.

South of France.

# 26. TRIOZA FLAVIPENNIS.

Trioza flavipennis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 98, 8.

Germany.

### 27. TRIOZA VITRIPENNIS.

Trioza vitripennis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 98, 9.

Prussia.

## 28. TRIOZA MARGINATA.

Psylla marginata, *Hartig*, *Germ. Ent. Zeit.* iii. 374, 7. Germany.

### 29. TRIOZA FUSCA.

Chermes fusca, Zett. Faun. Lapp. i. 552, 2. Ins. Lapp. 307, 2. Lapland.

### 30. TRIOZA PICTA.

Chermes picta, Zett. Faun. Lapp. i. 553, 3. Ins. Lapp. 308, 3. Lapland.

# 31. TRIOZA AFFINIS.

Chermes affinis, Zett. Faun. Lapp. i. 554, 6. Ins. Lapp. 308, 6. Lapland.

# 32. TRIOZA VIRIDULA.

Chermes viridula, Zett. Faun. Lapp. i. 555, 7. Ins. Lapp. 309, 7. Lapland.

# Genus 7. APHALARA.

Aphalara, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 389.

Psylla, p., Web. & Mohr.

Chermes, p., Zett.

### 1. APHALARA FLAVIPENNIS.

Aphalara flavipennis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 89, 1.

a, b. England. Presented by F. Walker, Esq.
c, d. Prussia. Presented by E. Doubleday, Esq.

### 2. APHALARA EXILIS.

Aphalara exilis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 89, 2.

Psylla exilis, Web. & Mohr.

a. England. Presented by F. Walker, Esq.

### 3. APHALARA POLYGONI.

Aphalara Polygoni, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 90. 3,

a. England. Presented by F. Walker, Esq.

#### 4. APHALARA NERVOSA.

Aphalara nervosa, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 90, 4.

Prussia.

# 5. Aphalara subfasciata.

Aphalara subfasciata, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 90, 5.

Prussia.

# 6. Aphalara innoxia.

Aphalara innoxia, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 90, 6.

Prussia.

### 7. APHALARA SUBPUNCTATA.

Aphalara subpunctata, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 91, 7.

Prussia.

### 8. APHALARA ULICIS.

Aphalara Ulicis, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 96, 3.

Europe.

### 9. APHALARA ARTEMISIÆ.

Aphalara Artemisiæ, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 96, 1.

Germany.

### 10. APHALARA SONCHI.

Aphalara Sonchi, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 96, 2.

Europe.

# 11. APHALARA NEBULOSA.

Chermes nebulosa, Zett. Faun. Lapp. i. 551, 1. Ins. Lapp. 307, 1. Lapland.

# 12. APHALARA ARCTICA.

Picea, fulvo varia; scutellum fulvo trivittatum; abdomen nigrum; pedes picei, genubus tarsisque ferrugineis; alæ subcinereæ.

Pitchy, with tawny marks: scutcheon with three tawny stripes: abdomen black: feelers black, filiform, slightly hairy, as long as the chest, with two bristles on each tip; first and second joints stout, pitchy: legs pitchy; knees and feet ferruginous: wings slightly gray; veins black, ferruginous at the base: upper fork at three-fourths of the length of the wing; lower fork near the middle, its

upper branch much curved, and thrice the length of its lower fork. Length of the body 1 line; of the wings  $2\frac{1}{2}$  lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by G. Barnston, Esq.

### Genus 8. RHINOCOLA

Rhinocola, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 67, 91. Chermes, p., Linn., Fabr.

Psylla, p., Curt.

### 1. RHINOCOLA ACERIS.

Rhinocola Aceris, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl.

1848, 3, 91.

- Chermes Aceris, Linn. Syst. Nat. ii. 739, 16. Faun. Suec. 1014. Fabr. Sp. Ins. ii. 392, 16. Mant. Ins. ii. 318, 16. Ent. Syst. iv. 223, 16. Syst. Rhyn. 306, 17. Gmel. Ed. Syst. Nat. i. 4, 2213, 16. Stew. El. Nat. Hist. ii. 112. Turt. Syst. Nat. ii. 711.
- a. Prussia. Presented by F. Walker, Esq.b. Prussia. Presented by E. Doubleday, Esq.

# 2. RHINOCOLA ERICÆ.

Rhinocola Ericæ, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3,91,2.

Psylla Ericæ, Curt. Brit. Ent. 565, 25.

a—f. England. Presented by F. Walker, Esq.
g. Prussia. Presented by E. Doubleday, Esq.
h. Prussia. Presented by F. Walker, Esq.

i. Fontainbleau. Presented by F. Walker, Esq.

# Genus 9. ANISOSTROPHA.

Chermes, p., Linn., Fabr., Gmel., Stew.
Psylla, p., Geoff., Tign., St. Farg. et Serv., Léon Duf., Amyot et
Serv.

Anisotropha, Foerster, Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 92.

## 1. ANISOTROPHA FIGUS.

Anisotropha Ficus, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 92.

Chermes Ficus, Linn. Syst. Nat. ii. 739, 17. Fabr. Sp. Ins. ii. 392, 17. Mant. Ins. ii. 318, 17. Ent. Syst. iv. 223, 17. Syst. Rhyn. 306, 18. Réaum. Ins. iii. pl. 29, f. 17—24. Gmel. Ed. Syst. Nat. i. 4, 2213, 17. Stew. El. Nat. Hist. ii. 111. St. Farg. et Serv. Enc. Méth. x. 229, 3. Duf. Rech. Hém. 104, pl. 9, f. 110—113. Amyot et Serv. Hist. Nat. Hém. 593, 1.

Psylla ficus, Geoff. Ins. i. 484, 1, pl. 10, f. 2. Enc. Méth. Hist. Nat. Ins. pl. 115, f. 1—7. Tign. Hist. Nat. Ins. iv. 165, pl. 4, f. 3.

Psylla, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 458, 511.

a. South of France.

### Genus 10. EUPHYLLURA.

Psylla, p., Fonscolombe. Euphyllura, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 93.

## 1. EUPHYLLURA OLEÆ.

Euphyllura Olex, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 93, 1.

Psylla Olew, Fonscolombe, Ann. Soc. Ent. Fr. ix. 111, 7.

South of France.

# 2. EUPHYLLURA PHILLYREÆ.

Euphyllura Phillyreæ, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 93, 2.

South of France.

# Genus 11. SPANIONEURA.

Spanioneura, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 94.

# 1. SPANIONEURA FONSCOLOMBII.

Spanioneura Fonscolombii, Foerster, Psyll. Verh. Nat. Ver. Preuss. Rheinl. 1848, 3, 94.

South of France.

PART IV.

### Fam. II. APHIDINA.

Aphidina, Burm. Handb. Ent. ii. 1, 85.

Gradipedes. Group 1, Aphides; 2, Myzoxylides, Amyot et Serv. Hist. Nat. Hém. 597, 609.

Aphidii, Latr.

Aphidæ, Curt., Westw.

Aphidina et Hyponomeutes, Hartig.

Aphidinæ, Rondani.

### Genus 1. APHIS.

Aphis, p., Linn., Fabr., Gmel., De la Hire, Bonnet, Réaum., Deg., Frisch., Richardson, Bjerkander, Hausm., Scop., Geoff., Schrank, W. Curtis, Latr., Kyber, Ratz., Duvau, Dutrochet, Kittel, Fonscol., Macq., Harris.

Aphis et Lachnus, Illig., Hartig, Kalt, Burm., Haliday, Bonafous,

Amyot et Serv.

Aphis et Cinara, Curtis, Mosley.

Eriosoma, p., Mosley.

Aphis (Doralis et Phalaris), Leach, Risso, Hist. Nat. Eur. Mérid. v. Aphis et Pterochlorus, Rondani.

# Group 1. Walk. Ann. Nat. Hist. Ser. 2, 1, 249.

# 1. Aphis Platanoidis.

Aphis Platanoidis, Schrank, Faun. Boic. ii. 1, 112, 1106. Kalt. Mon. Pflan. i. 13. Ratz. Forst. Ins. iii. 216, 1, pl. 11, f. 4. Hartig, Germ. Zeit. iii. 369, 9. Walk. Ann. Nat. Hist. Ser. 2, i. 250, 1. Entom. 173, 55.

Aphis Pseudoplatani, Sir Oswald Mosley, Gardener's Chronicle, i.

684.

Platanaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475, 518.

Fore-legs not much shorter than the hind-legs; shanks straight: vein of the fore-wing curving slightly inwards at two-thirds of its length, and again outwards where the brand commences; angle whence the fourth vein springs slight, distinct, at about two-thirds of length of brand; inclination of the rib-vein from thence to fore

border very slight; inclination of brand at its commencement between the vein and the border of the wing rather more abrupt than that of the tip of the brand; space between the first and second branch-veins at the base one-third of that between them at the tips; third vein nearly parallel to the second vein, the distance between them at the tips being hardly more than that at the base; first fork of the third vein at a little before one-third of its length, and its second fork at one half of the length of its first fork; the second fork runs straight towards the tip of the wing, and does not follow the curve of the fourth vein; the tips of the two forks are rather more distant from each other than the tip of the second fork is from the tip of the third vein; the fourth vein is much curved in the early part of its course, but afterwards is nearly straight; the space between its tip and that of the rib-vein is rather longer than the space between its tip and the tip of the second fork.

Var. Feelers with only six joints. Body pale yellow, with white limbs: the tips of the joints of the feelers are brown; the fourth joint is much shorter than the third; the fifth is brown, and less than half the length of the fourth; the sixth is rather longer than the third.

a-f. Scotland. Presented by E. Doubleday, Esq.
 g-o. England. (In Canada Balsam). From Mr. Walker's collection.

### 2. APHIS ACERINA.

Aphis Acerina, Walk. Ann. Nat. Hist. Ser. 2, i. 254, 2.

First and second branch-veins of the fore-wings diverging from each other, the distance between them at the tips is about thrice that at the base; first branch-vein about one-third more distant from the source of the wing at the tip than at the base; its tip much farther from the base of the wing than from the tip of the second vein, and about one-third farther from the tip of the second vein than the latter is from the tip of the third; second vein slightly curved, nearer to the third in the middle than at the base or at the tip, rather farther from the third at the tip than at the base; tip of the third vein more apart from the tip of the second vein than from the tip of the first fork, and more apart from the tip of the first fork than the latter is from the tip of the second fork; tip of the second fork much nearer to the tip of the fourth vein than to the tip of the first fork and than

the tip of the fourth vein is to the tip of the rib-vein; length of the third vein before the first fork generally much longer, sometimes a little shorter than its length between the forks; distance between the tip of the rib-vein and the tip of the fourth nearly twice that between the tip of the fourth and the tip of the third vein.

Var. Angle of the rib-vein beneath the brand less obtuse, and its outward side shorter in one wing than in the other.

a-d. England. (In Canada Balsam). From Mr. Walker's collection.

# Group 2. Walk. Ann. Nat. Hist. Ser. 2, i. 255.

# 3. APHIS BETULÆ.

Aphis Betulæ, Linn. Syst. Nat. ii. 735, 21. Faun. Suec. 992.

Bonnet, Hist. Nat. i. 3. Réaum. Ins. iii. pl. 22, f. 2. Deg. Ins. iii. 45, 3, f. 27, 28. Geoff. Ins. Par. i. 496, 7. Fabr. Sp. Ins. ii. 386, 20. Mant. Ins. ii. 316, 25. Ent. Syst. iv. 215, 25. Syst. Rhyn. 297, 25. Gmel. Ed. Syst. Nat. i. 4, 2206, 21. Enc. Méth. Hist. Nat. Ins. pl. 116, f. 9. Schrank, Faun. Boic. ii. 1, 107, 1189. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 705. Kalt. Mon. Pflan. i. 144, 118. Walk. Ann. Nat. Hist. Ser. 2, i. 255, 3.

Aphis nigritarsis, Heyden, Mus. Senkenburg, ii. Heft. 3, 299. Kalt. Mon. Pflan. i. 135, 103. Ratz. Forst. Ins. iii. 218, 20. Aphis punctipennis? Zetterstedt, Faun. Lapp. i. 559, 4. Ins. Lapp.

ii. 2, 311, 7.

Nigritarsifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 480.

The viviparous winged female. This, before the end of March, is nearly elliptical, plump, bristly, very dark green, or almost black above, but paler beneath: six rows of tubercles along the back: mouth reaching a little beyond the hind legs: feelers less than half the length of the body: legs rather short and stout. As it increases in size it becomes dark green, with the exception of the tubercles. Fore-legs not much shorter than the hind-legs: rib slightly inclined towards the fore-border at two-thirds of the length, and receding from it beneath the brand, where it forms a distinct very long obtuse angle; this begins very shortly after the middle of the fore border, is about one-third of the whole length of the wing, nearly linear, except at the tip, where it forms a long acute angle; first, second, and third branch-veins obsolete before their source, especially the third vein, whose first fork begins at a little before one-third of its

length, and its second very soon after two-thirds, but this structure is variable; space between the first and second branch-veins at the base, one-fourth of that between them at the tips; tip of the third vein a little farther from the tip of the second than it is from the tip of the first fork, and than the latter is from the tip of the second fork; third vein near the tip slightly inclined towards the fourth; the latter much curved near the base, slightly so from the middle to the tip; space from its base to the tip of the rib-vein nearly equal to that between the latter and its tip.

Var. Space between the angle of the rib-vein longer in one wing than in the other; fourth vein moderately curved from the middle to the tip.

Var. Fourth vein straight from the middle to the tip.

a, b. Scotland. Presented by E. Doubleday, Esq.

c-z. England (In Canada Balsam). From Mr. Walker's collection.

### 4. APHIS COMES.

Aphis comes, Walk. Ann. Nat. Hist. 2nd Série, i. 258, 4. England.

Group 3. Walk. Ann. Nat. Hist. Ser. 2, i. 259.

### 5. Aphis oblonga.

Aphis oblonga, Von Heyden, Ent. Beitr. Mus. Senkenb. ii. Heft. 3. Stet. Ent. Zeit. Jahr. v. 12. Kalt. Mon. Pflan. i. 144. Ratz. Forst. Ins. iii. 219, 23. Stet. Ent. Zeit. 1844, 9, 81, 133, 410. Walk. Ann. Nat. Hist. Ser. 2, i. 259, 5.

Mecynaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 480.

Distance between the first and second veins at the base less than one-fourth of that between them at the tips; third not farther from the second at the tip than at the base, more than twice farther from the second at the base than the second is from the first; first fork very little nearer at the tip to the second fork than to the tip of the third vein, very little farther from the third vein than the third is from the second; second fork a little farther from the third vein than from the first fork; fourth vein curved near the base, almost straight towards the tip, much farther from the second fork than from the tip of the rib-vein.

a. England. (In Canada Balsam). From Mr. Walker's collection.

Group 4. Walk. Ann. Nat. Hist. 2me Série, i. 328.

## 6. Aphis Fagi.

Aphis Fagi, Linn. Syst. Nat. ii. 735, 23. Faun. Suec. 994. Bonnet, Hist. Nat. i. 2. Réaum. Ins. iii. pl. 26, f. 1. Geoff. Ins. Par. i. 497, 12. Fabr. Mant. Ins. ii. 316, 24. Ent. Syst. iv. 214, 24. Syst. Rhyn. 297, 24. Gmel. Ed. Syst. Nat. i. 4, 2207, 23. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 705. Fonscol. Ann. Soc. Ent. x. 194, 34. Walk. Ann. Nat. Hist. Ser. 2, i. 328, 6.

Kermes Fagi, Enc. Méth. Hist. Nat. Ins. pl. 118, f. 1—6. Lachnus Fagi, Burm. Handb. Ent. ii. 92, 2. Kalt. Mon. Pflan. i.

147, 1. Ratz. Forst. Ins. iii. 219, 25.

Eriosoma Fagi, Sir Oswald Mosley, Gard. Chron. i. 828. Phegirus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 480, 530.

Rib-vein slightly approaching the fore border, then receding from it and forming a very obtuse angle beneath the brand, which is rather long; first branch-vein slightly oblique, full four times more remote from the second at the tip than it is at the base; second very oblique, a little curved outward; third hardly more oblique than the second, farther from the second at the base than the second is from the first, but as near again to it at the tip; first fork at the tip a little nearer to the second than it is to the third vein, which is still more remote from the second vein; space between the forks, between the second fork and the fourth vein, and between the fourth vein and the tip of the rib-vein, almost equal; fourth vein rather long, slightly curved along its whole length.

a-g. Scotland. Presented by E. Doubleday, Esq.
h-m. (In Canada Balsam). From Mr. Walker's collection.

Group 5. Walk. Ann. Nat. Hist. Ser. 2, i. 330.

## 7. APHIS ANTENNATA.

Aphis antennata, Kalt. Mon. Pflan. 115, 88. Ratz. Forst. Ins. iii. 218, 13. Walk. Ann. Nat. Hist. Ser. 2, i. 330, 7.

Front of the winged insect slightly concave with a little projection on each side; of the wingless female slightly convex: first and second joints of the feelers stout, not angular: fore-legs but little stouter than the hind-legs; shanks very slightly curved: brand

very long, nearly linear, equal to half the length of the rib-vein, begins to widen gradually before the middle of the wing: rib-vein broad, approaching the fore border at the commencement of the brand, afterwards diverging very slightly: it forms no angle at the source of the fourth vein, and its length beyond the base of that vein is more than the space between its tip and that of the fourth vein, and the latter distance is nearly double the space between its tip and that of the fourth vein and the tip of the third vein; the space between the first vein and the second at the tips is almost thrice that at the base, and much more than half the space between the tip of the first vein and the base of the wing; the space of the third vein between the forks is much shorter than that between the first fork and the base, and as long as that between the second fork and the tip of the wing; the space between the tip of the second fork and the tip of the third vein is much less than that between the tip of the second fork and the tip of the first fork; the third vein is not obsolete till close to its source; fourth vein very slightly curved, nearer to the tip of the rib-vein than to the second fork.

a—c. England. (In Canada Balsam). From Mr. Walker's collection.

# Group 6. Walk. Ann. Nat. Hist. Ser. 2, 331.

## 8. Aphis Tiliæ.

Aphis Tiliæ, Linn. Syst. Nat. ii. 734, 11. Faun. Suec. 984. Réaum. Ins. iii. pl. 23, f. 8. Geoff. Ins. Par. i. 495, 6. Deg. Ins. iii. 77, 12, pl. 5, f. 1—6. Leeuwenh. Lettr. 1696, 293, 294. Frisch. Ins. xi. 1, 3, pl. 17. Fabr. Sp. Ins. ii. 388, 34. Mant. Ins. ii. 316, 39. Ent. Syst. iv. 218, 39. Syst. Rhyn. 299, 39. Gmel. Ed. Syst. Nat. i. 4, 2204, 11. Schrank, Faun. Boic. ii. 1, 117, 1223. Berk. Syn. i. 119. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 707. Shaw, Gen. Zool. vi. 171, 8, 1223. Latr. Gen. iii. 173. St. Farg. et Serv. Enc. Méth. x. 247. Burm. Handb. Ent. ii. 95, 5. Fonscol. Ann. Soc. Ent. Fr. x. 182, 25. Curt. Brit. Ent. 577. Sir Oswald Mosley, Gard. Chron. i. 684. Kalt. Mon. Pflan. i. 129, 99. Ratz. Forst. Ins. iii. 219, 22. Walk. Ann. Nat. Hist. Ser. 2, i. 331, 8.

Philyriptus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479, 528.

Rib-vein very strong; the space between it and the fore border is coloured along the whole length, but is partly colourless towards the tip; it runs parallel to the border of the wing for more than two-thirds of its length, then it slightly approaches the border and after-

wards recedes, and forms a very obtuse angle; the distance between this angle and the tip of the brand, is less than that between the tip of the brand and the tip of the fourth vein; space between the first and second branch veins at the base almost half of that between them at the tips; first vein nearly straight, diverging rather more from the second, than the second does from the third; its tip is much nearer to the tip of the second vein than to the base of the wing; second vein curved slightly, first outward, then inward in its course, wherein it slightly diverges from the third vein, to whose base it is a little nearer than to the base of the first vein; its tip is much nearer to the tip of the third than to the tip of the first vein; the third vein is curved slightly and irregularly inward, so as in some degree to conform to the fourth vein; its base is much nearer to the base of the second vein than to that of the fourth vein; its first fork begins at half the length, and its second beyond half the length of the first; the tip of its second fork is hardly farther from the tip of the fourth vein than from the tip of its first fork, and the space between its forks is much less than the space between its tip and that of its first fork, and the latter space is rather less than the space between its tip and that of the second vein; fourth vein much curved throughout its length; its tip a little nearer to the tip of the brand than to the tip of the second fork, and the distance from its base to the tip of the brand is only half that to the base of the third vein; the rib-vein of the lower wing is slender, and continues to its tip; it has two straight veins diverging slightly from each other, and consequently rather more distant at the tips than at the base; the space between them at the base is less than that between the first and the base of the wing, and still less than that between the second and the tip of the wing.

Var. Third vein in one wing without a second fork.

Var. A fork proceeding from the angle, which is formed by the second fork of the third vein.

Var. The part of the third vein between the forks longer than either the preceding or the succeeding part.

Var. The second fork with double its usual length.

Var. A third fork proceeding from near the base of the first fork of the third vein.

The winged male. The fourth feeler-joint is more than half the length of the third; the fifth is shorter than the fourth; the sixth than the fifth, and the seventh than the sixth.

a—g. Scotland. Presented by E. Doubleday, Esq.
h—k. England. (In Canada Balsam). Presented by F. Walker, Esq.

Group 7. Walk. Ann. Nat. Hist. Ser. 2, i. 333.

### 9. APHIS BETULICOLA.

Aphis Betulicola, Kalt. Mon. Pflan. i. 44. Ratz. Forst. Ins. iii. 216, 2. Walk. Ann. Nat. Hist. Ser. 2, i. 333, 9.

The rib-vein slightly approaches the fore border before it recedes from it and incloses the brand; its angle is at three-fourths of the length of the brand, and though very obtuse is more decided than in many other species; the fourth vein is much curved throughout its length; its tip only is usually apparent, and is a little nearer to the tip of the rib-vein than to the tip of the third vein; the third vein springs from the rib-vein, a very little before the latter recedes from the fore border, the space between the first and the second forks shorter than the third fork, and much shorter than the third vein before the first fork; it forms two distinct angles when it emits the forks; its distance along the rib-vein from the fourth vein, is very nearly twice that from the second; the tip of the second fork is a very little nearer to the tip of the fourth vein than to the tip of the first fork; the tip of the first fork is nearer to the tip of the second than to the tip of the third vein, and the latter is a little nearer to the tip of the first fork, than to the tip of the second vein; the second vein is nearly straight, and diverges slightly from the third, and its distance from the latter at the tip is farther by half than at the base; its distance at the base from the third vein is a little less than that from the first vein at the base, but much less at the tip; the first vein diverges considerably from the second, and is almost perpendicular to the rib-vein; its distance on the rib-vein from the second vein is much less than half its distance from the base of the wing, but at the tip it is much more than the above proportion; the distance between these veins at the base is much less than half that at their tips: the legs are long and slender, the hind-legs rather longer than the rest, their shanks slightly curved: there is an appendage on each side of the first joint of the feelers.

Var. The second part of the third vein is longer than the first or the second.

Var. No second fork in one wing; in the other wing no first vein; its second vein is forked, but both the branches cease before they attain the hind border; the third vein has no fork, and also comes short of the usual length.

Var. No first fork in one wing.

a-h. England. (In Canada Balsam). From Mr. Walker's collection.

### 10. APHIS JUGLANDINA.

Aphis Juglandina, Walk. Ann. Nat. Hist. Ser. 2, i. 335, 10.

Rib-vein approaching the fore border, then receding from it, and forming an obtuse angle, whose outward side is not more than half the length of the inward one; first branch-vein very slightly oblique, hardly curved outward, twice farther more remote from the second at the tip than it is at the base; second oblique, slightly undulating; third very slightly undulating, more oblique than the second, nearer to the second at the base than the second is to the first, and the space between the latter at the tips is almost twice that between the second and third; first fork at the tip as near to the second fork as to the third vein, and nearer than the third vein is to the second vein; space between the forks a little less than that between the second fork and the fourth vein, but more than that between the fourth vein and the rib-vein; fourth vein rather short, much curved along its whole length.

England.

### 11. APHIS CORYLI.

Aphis Coryli, Götze, Ent. Beiträge, ii. 311. Gmel. Ed. Syst. Nat. i. 4, 2210, 69. Kalt. Mon. Pflan. i. 98, 73. Walk. Ann. Nat. Hist. Ser. 2, i. 336, 11.

Corylaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

First branch-vein nearly perpendicular; second slightly undulating, much more oblique; the distance between them at the base about one-third of that between them at the tips; third vein more oblique than the second, their mutual distance at the tips about twice that at the base, and nearly equal to the distance between the tips of the third and of its first fork; second fork forming a less acute angle than the first, as long as one-third of the third vein; fourth vein much curved along its whole length.

a-n. England. (In Canada Balsam). From Mr. Walker's collection.

### 12. APHIS ANNULATA.

Aphis annulatus? Hartig, Germ. Zeit. iii. 369, 10. Aphis Quercûs, Kalt. Mon. Pflan. i. 98, 74. Ratz. Forst. Ins. iii. 217, 10. Walk. Ann. Nat. Hist. Ser. 2, i. 337, 12.

The rib-vein is parallel to the fore border till it slightly inclines thereto at a little before the beginning of the brand, where the space between them widens; the angle of the brand is distinct, and the space between it and the tip of the rib-vein is near half the length of the brand; the fourth vein is curved towards the base, but its latter part is nearly straight; the space between its tip and that of the ribvein is a little more than that between the latter and its angle; the third vein before the first fork is generally a little longer than the space between the forks, but sometimes as long or even shorter; the distance between the tips of the second fork and of the fourth vein is more than that between the tips of the two forks, and very much more than that between the tips of the fourth and of the rib-vein; the space between the tips of the third vein and of the fork is much more than that between the tips of the fork, and a little more than that between the tips of the second and third veins; the third vein springs from the rib-vein a little before the latter diverges from the fore border; the second vein diverges from the third vein, and their mutual distance at the base is about half that at their tips. and much less than the distance between the second and first veins.

a—d. Scotland. Presented by E. Doubleday, Esq.
 e—j. England. (In Canada Balsam). From Mr. Walker's collection.

# 13. Aphis Quercea.

Aphis Quercea, Kalt. Mon. Pflan. i. 136, 104. Ratz. Forst. Ins. iii. 218, 21. Walk. Ann. Nat. Hist. Ser. 2, i. 340, 13.

The rib-vein approaches the fore border very slightly before it diverges thence and encloses the brand; the latter is rather broad in proportion to its length, and the distance from the angle whence the fourth vein springs to the tip of the rib-vein is about one-third of the length of the brand; the fourth vein is much curved, more so than that of A. annulata; it is nearly straight towards the tip, the distance between which and that of the rib-vein is rather less

than that of the whole length of the brand, and also rather less than the space between its tip and that of the second fork of the third vein; the third vein is invisible at its source, but its direction is towards the rib-vein at the point where the latter begins to widen; its length before the first fork is longer than its second fork, and still more so than the space between the forks; its distance from the second vein at the base is less than half of their mutual distance at their tips, and hardly half the distance between the base of the second and that of the first vein; the distance between the tip of the forks of the third vein is about equal to the space between the tip of the second fork and that of the fourth vein, and less than that between its tip and that of the first fork; the distance between the second and the third veins at their tips is very much less than that between the tips of the second and first veins; the distance between the first and the second veins at the base less than half the distance between them at their tips.

a—g. England. (In Canada Balsam). From Mr. Walker's collection.

### 14. Aphis Alni.

Aphis Alni, Fabr. Sp. Ins. ii. 386, 21. Mant. Ins. ii. 316, 26. Ent. Syst. iv. 215, 26. Syst. Rhyn. 298, 26. Gmel. Ed. Syst. Nat. i. 2206, 54. Deg. Ins. iii. 47, 4, pl. 3, f. 15—17. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 110. Latr. Gen. iii. 173. Kirby & Spence, Intr. Ent. iii. 76. St. Farg. et Serv. Enc. Méth. Hist. Nat. x. 248. Kalt. Mon. Pflan. i. 137, 105. Ratz. Forst. Ins. iii. 219, 24. Walk. Ann. Nat. Hist. Ser. 2, i. 341, 14.

Kermes Alni? Enc. Méth. Hist. Nat. Ins. pl. 119, f. 2—4. Aphis maculata, Von Heyden, Mus. Senk. ii. 297. Clethraphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 480.

The rib-vein is parallel to the fore border till it approaches the latter, and again diverges from it; it encloses no brand, and does not form an angle, but is slightly curved outward till it joins the fore border; the widened part is rather short; there are no traces of the fourth vein except at its tip, which is nearer to the tip of the third vein than to that of the rib-vein: the third vein springs from the rib-vein a little after the begiuning of the widened part; its length before the first fork is as long as the space between the forks, and a little longer than the second fork; the distance between the tips of the forks is much more than that between the tip of the

second fork and that of the fourth vein, but much less than the space between the tip of the third vein and that of its first fork; the second vein diverges slightly from the third vein, and is a little nearer to it at the base than at the tip, and its base is also a little nearer to the third vein than it is to the first; the distance between the tips of the second and third veins is a little less than the space between the tip of the third and that of its first fork, and a little more than half the space between the first and second veins; the space between the first and second veins at the base is a little more than half of that between them at the tips.

a-r. England. (In Canada Balsam). From Mr. Walker's collection.

### 15. Aphis Juglandicola.

Lachnus Juglandicola, Kalt. Mon. Pflan. i. 151, 4. Aphis Juglandicola, Walk. Ann. Nat. Hist. Ser. 2, i. 343, 15.

The rib-vein is very slender, and nearly parallel to the fore border of the wing, to which its approach and divergence afterwards is very slight; there is no brand, but the vein forms a distiuct though slight angle, and the space which it here encloses is rather short and broad; there is generally no fourth vein; the length of the third vein before the first fork is shorter than the space between the forks, but longer than the second fork; it is rather thick and quite distinct at its base; the distance between the tips of the forks is about half that between the tip of the third vein and that of its second fork; the second vein is straight, it diverges from the third, and the distance between them at their tips is nearly twice that at the base; the distance between the tip of the second vein and that of the third vein is about equal to that between the latter and the tip of its first fork; along the rib-vein the first vein is farther by half from the second than the second is from the third, and its distance from the second at the tip is farther than that at the base by much more than half.

In the female there are generally no traces of the fourth vein of the wing, but in some instances it is quite distinct; it springs from the angle of the rib-vein, and is slightly curved throughout its length; its tip is nearly as far from that of the rib-vein as it is from the tip of the third vein. The dark colour of the oviparous female seems to be owing to the eggs within it, these are three or four in number. In the male there is a coloured space between the rib-vein and the fore border; the brand is darker towards the base, and the fourth vein is distinct: it is more active than the males of the other

species, the chest is much developed, and the abdomen is small. In two instances the female has a distinct brand like that of the male.

Var. Male.—The third vein is joined by a cross-vein to the second a little before half the distance from the base of the first fork.

Var. Male.—The second branch-vein is obsolete for the latter half of its length, and the lower branch of the first fork of the third vein is also forked soon after its source; these forks diverge much from each other, and pass to the lower border of the wing.

Var. Fem.—The second vein is forked near its base, one fork joins the rib-vein, and the other fork joins the base of the third vein.

Var. Male.—A little cross-vein communicates between the second and the third veins near their base.

Var. Male and Fem.—Third vein before the first fork longer than the space between the forks, and much longer than the second fork.

a-u. England. (In Canada Balsam). From Mr. Walker's collection.

### 16. APHIS PLATANI.

Lachnus Platani, Kalt. Mon. Pflan. i. 152, 5. Aphis Platani, Walk. Ann. Nat. Hist. Ser. 2, i. 344, 16.

Rib-vein approaching the fore border, near the brand beneath it diverges much, and forms an obtuse angle; brand broad, brown, with a colourless spot; distance between the first and second veins more than twice farther at the tips than at the base; second and third veins slightly undulating; third almost twice farther from the second at the tip than at the base, much nearer to the second at the base than the second is to the first: first fork a little nearer to the second fork than to the third vein, generally as near to the third vein as the third is to the second; no fourth vein.

This species, with A. Juglandis and the eight preceding species, forms a genus or group, which is chiefly characterised by the up-

rightness of the first vein.

a-f. Russia. Presented by F. Walker, Esq.

Group 8. Walk. Ann. Nat. Hist. Ser. 2, i. 443.

### 17. APHIS JUGLANDIS.

Aphis Juglandis, Frisch. Ins. xi. 12, 10, pl. 16, f. 1, 5. Gmel. Ed. Syst. Nat. i. 2210, 70. Walk. Ann. Nat. Hist. Ser. 2, i. 443, 17.

Lachnus Juglandis, Kalt. Mon. Pflan. i. 150, 3. Juglandifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481.

The rib-vein is stout, and almost imperceptibly approaches the fore border till it diverges and encloses the brand, which is somewhat darker than the rest of the space between the rib-vein and the fore border; the angle is distinct, and the space thence to the tip is almost one-third of the length of the brand; the fourth vein is much curved throughout, and the distance of its tip from that of the rib-vein is rather less than that of the latter from the angle; the third vein has its source where the rib-vein diverges from the fore border; the space between its forks exceeds its length before the first fork, and is still longer than the second fork; its distance at the base from the fourth is full twice that of the latter from the tip of the rib-vein, and it is nearly equally distant between the fourth and the second veins; it is slightly curved near the base; the distance between the first and second veins at their tips exceeds by rather more than half that between them at the base; the distance between the first and second veins at the base is rather less than that between the second and third veins, but at their tips it is much more; the first vein diverges much from the second, and is perpendicular to the rib-vein.

a. England. Presented by J. C. Dale, Esq.
 b—i. England. (In Canada Balsam). From Mr. Walker's collection.

Group 9. Walk. Ann. Nat. Hist. Ser. 2, i. 444.

18. Aphis bifrons.

Aphis bifrons, Walk. Ann. Nat. Hist. Ser. 2, i. 444, 18. England.

# Group 10. Walk. Ann. Nat. Hist. Ser. 2, i. 445.

### 19. Aphis Populi.

Aphis Populi, Linn. Syst. Nat. ii. 736, 27. Faun. Suec. 997. Swammerd. Hist. Nat. Coll. Acad. v. 531. Réaum. Ins. iii. pl. 26, f. 7—11, pl. 27, f. 1—14. Deg. Ins. iii. 94, 15, pl. 7, f. 1—7. Fabr. Sp. Ins. ii. 386, 22. Mant. Ins. ii. 316, 27. Ent. Syst. iv. 216, 27. Syst. Rhyn. 298, 27. Schrank, Faun. Boic. ii. 1, 113, 1211. Gmel. Ed. Syst. Nat. i. 2207, 27. Hausmann, Illig. Mag. i. 443, 6. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 705. Rossi, Faun. Etrusc. 260, 1371. Samouelle, Comp. i. 4. Enc. Méth. Hist. 527. Ins. pl. 116, f. 1—5. Nouv. Dict. Hist. Nat. xxviii. 254. Rusticus, Ent. Mag. iii. 337. Kalt. Mon. Pflan. i. 126, 98. Ratz. Forst. Ins. iii. 218, 16. Walk. Ann. Nat. Hist. Ser. 2, i. 445, 19.

Aphis Populeti, Panz. Faun. Ins. Germ. lxxviii. 18. Aphis Populi albæ? Fonscol. Ann. Soc. Ent. Fr. 187, 29.

Rib-vein hardly approaching the fore border, and then very slightly diverging from it; its angle is very blunt and hardly perceptible; the space thence to the tip is full three-fourths of the whole length of the part which forms the angle, and rather more than half the length from its tip to the tip of the fourth vein; first vein very oblique to the rib-vein; the length from its source to the base of the wing is less than three-fourths of the length of the base from its tip; second vein more oblique than the first vein, from which its distance at the base is almost one-third of that at their tips; its distance at the base from the first vein is rather less than onethird or than one-fourth of that length from the base of the first to the base of the wing; the distance between the tips of the first and second veins is nearly half that between the tip of the first and the base of the wing; third vein vanishing at its source, almost parallel to the second till near the tip, their mutual distance on the hind border a little exceeding that between them on the rib-vein, and the latter distance is much more than that between the first and second veins, but on the hind border it is much less; space between the two forks of the third vein much longer than the basal part or than the second fork, which are about equal in length; space between the tip of third vein and that of its first fork more than that between the tips of the second and third veins, and still more than that between the tips of the first and second forks; space between the tips of the first and second forks a little less

than the space between the tip of the second fork and that of the fourth vein; fourth vein rather long, slightly curved for half its length, nearly straight from thence to the tip, which is much nearer to the tip of the second fork than to the tip of the rib-vein.

Var. Fem.—Fourth joint of the feelers little more than half the length of the third; fifth a little shorter than the fourth; sixth much shorter than the fifth; seventh much longer than the fifth. Sometimes the second fork of the third vein varies most in the wings of one insect.

Var. Male. — The fourth vein vanishing from the middle to the tip.

Var. Male.—The second fork of the third vein longer than the space between the forks, and still more so than the part before the first fork.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

#### 20. Aphis hirticornis.

Aphis hirticornis, Walk. Ann. Nat. Hist. Ser. 2, i. 447, 20.

Rib-vein hardly approaching the fore border, and then very slightly diverging from it; the angle is very blunt, and hardly perceptible, and its outward side is much shorter than the space between the tip of the rib-vein and that of the fourth vein; first vein very oblique to the rib-vein; second vein more oblique than the first, from which its distance at the base is almost or hardly one-third of the distance at their tips; third vein vanishing at its source, almost parallel to the second till near the tip, their mutual distance on the hind border a little exceeding that between them along the rib-vein, the latter distance much more than that between the first and second veins, but on the hind border it is much less; distance between the two forks much longer than the third vein before the first fork or than the second fork; a nearly equal distance between the tips of the third vein and of the first fork, between the tips of the second and third veins, and between the tips of the first and second forks, which last distance much exceeds that between the second fork and the tip of the fourth vein; fourth vein rather long, slightly curved for half its length, nearly straight from thence to the tip, which is much nearer to the tip of the second fork than to the tip of the rib-vein.

Var. Length between the forks of the third vein in one wing only half of that in the other wing.

England.

# Group 11. Walk. Ann. Nat. Hist. Ser. 2, i. 448.

### 21. APRIS ACERIS.

Aphis Aceris, Linn. Syst. Nat. ii. 736, 31. Faun. Suec. 999. Réaum. Ins. iii. 281—350, pl. 22, f. 6—10. Fabr. Syst. Ent. 735, 9. Sp. Ins. ii. 385, 10. Mant. Ins. ii. 315, 11. Ent. Syst. iv. 212, 11. Syst. Rhyn. 295, 11. Geoff. Ins. Par. i. 495, 5. Scopoli, Ent. Carn. 137, 397. Rossi, Faun. Etrusc. 260, 1372. Schrank, Faun. Boic. ii. 1, 111, 1205. Gmel. Ed. Syst. Nat. i. 2208, 31. Enc. Méth. Ins. pl. 116, f. 6. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 111? Turt. Syst. Nat. ii. 703. Fonscol. Ann. Soc. Ent. Fr. x. 173, 13. Kalt. Mon. Pflan. i. 125, 97. Ratz. Forst. Ins. iii. 218, 15. Walk. Ann. Nat. Hist. Ser. 2, i. 448, 21.

Acerifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479. Aphis Aceris? (New York), Fitch, The Senate, No. 30, 66.

Aphis villosus? Hartig, Germ. Zeit. iii. 369, 8.

Rib-vein hardly approaching the fore border, and then very slightly diverging from it; the angle is very blunt and hardly perceptible, and its outward side is rather less than three-fourths of the length of the inward side, and as long as the space between the tip of the rib-vein and that of the fourth vein; first vein very oblique to the rib-vein; second vein more oblique than the first vein, from which its distance at the base is almost or hardly one-third of the distance at their tips; third vein vanishing at its source, almost parallel to the second till near the tip, their mutual distance on the hind border a little exceeding that between them along the rib-vein, the latter distance much more than that between the first and second veins, but on the hind border it is much less; distance between the two forks much longer than the third vein before the first fork and than the second fork; distance between tip of third vein and that of its first fork rather less than that between the second and third veins; distance between first and second forks as long or longer than that between the second fork and the tip of the fourth vein; fourth vein rather long, slightly curved for half its length, nearly straight from thence to the tip, which is much nearer to the tip of the second fork than to the tip of the rib-vein.

a—c. Scotland. Presented by E. Doubleday, Esq.
 f—ww. England. (In Canada Balsam). From Mr. Walker's collection.

### 22. APHIS ACERICOLA.

Aphis Acericola, Walk. Ann. Nat. Hist. Ser. 2, i. 451, 22.

a. England. Presented by F. Walker, Esq.

b. Interlacken, Switzerland. Presented by F. Walker, Esq.

### 23. APHIS QUADRITUBERCULATA.

Aphis quadrituberculata, Kalt. Mon. Pflan. i. 134, 102. Ratz. Forst. Ins. iii. 218, 19.

a-c. England. Presented by F. Walker, Esq.

Group 12. Walk. Ann. Nat. Hist. Ser. 2, i. 451.

# 24. Aphis Populea.

Aphis Populea, Kalt. Mon. Pflan. i. 116, 90. Walk. Ann. Nat. Hist. Ser. 2, 1, 451, 23.

Lachnus punctatus, Burm. Handb. Ent. ii. 93, 5.

a-h. England. (In Canada Balsam). From Mr. Walker's collection.

# 25. Aphis Salicis.

Aphis Salicis, Linn. Syst. Nat. ii. 736, 26. Faun. Suec. 995. Réaum. Ins. iii. 281—350, pl. 22, f. 2. Deg. Ins. iii. 50, 11. Fabr. Sp. Ins. ii. 389, 41. Mant. Ins. ii. 317, 46. Ent. Syst. iv. 219, 47. Syst. Rhyn. 301, 47. Gmel. Ed. Syst. Nat. i. 2207, 2210, 26. Rossi, Faun. Etrusc. 264, 1398. Schrank, Faun. Boic. ii. 1, 102, 1176. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 707. Shaw, Gen. Zool. vi. 170. W. Curtis, Linn. Trans. vi. 75, 94, pl. 5, f. 1, 2. St. Farg. et Serv. Enc. Méth. x. 247. Fonscol. Ann. Soc. Ent. Fr. x, 176, 16. Kalt. Mon. Pflan. i. 131, 100. Ratz. Forst. Ins. iii. 218, 18. Walk. Ann. Nat. Hist. Ser. 2, i. 452, 24.

Cinara Salicis, Sir Oswald Mosley, Gard. Chron. i. 827. Salicifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, x. 16. Aphis Salicis? Hal. Ent. Mag. ii. 102. Rusticus, Ent. Mag. i. 218.

Rib-vein very slightly approaching the fore border, and then slightly diverging from it, and forming an extremely obtuse angle; brand rather long; first branch-vein oblique, two-thirds nearer to the second at the base than it is at the tip; second and third very oblique, a little farther from each other at the tips than they are at the base; vein between the forks and second fork nearly equal, and a little longer than the third vein before the first fork; space between the forks more than that between the second fork and the third vein, and less than that between the first fork and the third vein, which is almost equal to the space between the second and third veins; fourth vein much curved near the base, straight from thence to the tip, twice as far from the tip of the rib-vein as from the tip of the second fork.

Europe.

Group 13. Walk. Ann. Nat. Hist. Ser. 2, i. 453.

26. Aphis Salicivora.

Aphis Salicivora, Walk. Ann. Nat. Hist. Ser. 2, i. 453, 25. Cinara Capreæ, Sir Oswald Mosley, Gard. Chron. i. 748.

The oviparous wingless female is lozenge-shaped, dark green, dull, smooth, and rather flat: the head is dull yellow: the hind part of the abdomen is pale yellow, and lengthened: the feelers are pale yellow, setaceous, black towards the tips, and about half the length of the body: the eyes are black and rather prominent: the legs are pale yellow: the knees, and the tips of the feet are black.

Var. The body is elliptical, flat, thin, shining, thinly clothed with white hairs, dull white, with a broad, irregular black stripe along each side: the feelers are white with brown tips, and less than half the length of the body: the legs are white; the tips of the feet are black.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

Group 14. Walk. Ann. Nat. Hist. Ser. 2, ii. 43.

#### 27. Aphis Glyceriæ.

Aphis Glyceriæ, Kalt. Mon. Pflan. i. 113, 87. Walk. Ann. Nat. Hist. Ser. 2, ii. 43, 26.

Rib-vein hardly approaching the fore border, not receding again from it, forming an extremely slight angle; first branch-vein slightly oblique, more than twice farther from the second at the tip than it is at the base; second oblique; third very oblique, nearer to the second at the base and at the tip than the second is to the first; tip of the third vein much nearer to the first fork than to the second vein, and as far from the first fork as the space between the forks, or that between the second fork and the fourth vein; fourth vein rather long, slightly curved near the base, much nearer at the tip to the second fork than to the tip of the rib-vein.

a-q. England. (In Canada Balsam). From Mr. Walker's collection.

#### 28. Aphis littoralis.

Aphis littoralis, Walk. Ann. Nat. Hist. Ser. 2, ii. 44, 27. England.

## 29. Aphis hirtellus.

Atheroides hirtellus, *Haliday*, *Ann. Nat. Hist.* 1838, 189. Aphis hirtellus, *Walk. Ann. Nat. Hist. Ser.* 2, ii. 45, 28. a. England. Presented by F. Walker, Esq.

## 30. Aphis Cyperi.

Aphis Cyperi, Walk. Ann. Nat. Hist. Ser. 2, ii. 45, 29. Ireland.

Group 15. Walk. Ann. Nat. Hist. Ser. 2, ii. 46.

## 31. Aphis Eriophori.

Aphis Eriophori, Walk. Ann. Nat. Hist. Ser. 2, ii. 46, 30. a—d. Ireland. (In Canada Balsam). From Mr. Walker's collection.

Group 16. Walk. Ann. Nat. Hist. Ser. 2, ii. 46.

32. Aprils Bufo.

Aphis bufo, Haliday, MSS. Walk. Ann. Nat. Hist. Ser. 2, 46, 31. Great Britain.

Group 17. Walk. Ann. Nat. Hist. Ser. 2, ii. 47.

33. APHIS SERRULATUS.

Atheroides serrulatus, Haliday, Ann. Nat. Hist. 1839, 189. Aphis serrulatus, Walk. Ann. Nat. Hist. Ser. 2, ii. 47, 32. a—d. Ireland. (In Canada Balsam). Presented by F. Walker, Esq.

Group 18. Walk. Ann. Nat. Hist. Ser. 2, ii. 95.

## 34. Aphis Piceæ.

Aphis Piceæ, Panz. Faun. Ins. Germ. lxxviii. 22. Fabr. Syst. Rhyn. 302, 56. Zett. Faun. Lapp. i. 557, 1. Ins. Lapp. i. 310, 1. Ann. Nat. Hist. 1848, 95. Walk. Ann. Nat. Hist. Ser. 2, ii. 95, 33.

Lachnus grossus, Kalt. Ent. Zeitung, 1846, 175. Aphis ———? Schäffer, Icon. Ins. Ratisb. pl. 222, f. 4, 5.

Rib-vein very slightly approaching the fore border, hardly again receding from it, forming a slightly obtuse angle close to its tip; brand near half the length of the wing; first branch-vein slightly oblique, very slightly undulating, six times farther from the second at the tip than it is at the base; second very oblique, slightly undulating, much nearer to the first than to the third at the base, but much farther at the tip; third straight, as oblique as the second, much more distant from it at the tip than at the base; forks very long; first at the tip a little nearer to the third vein, than the third is to the second; and more than twice farther from the third than it is from the second fork; second fork much nearer to the fourth vein than to the first; fourth long, straight.

a-c. Grimsel, Switzerland. Presented by the Entomological Society.

### 35. Aphis Pini.

Aphis Pini, Linn. Syst. Nat. ii. 736, 25. Faun. Suec. 994. Fabr. Mant. Ins. ii. 317, 44. Sp. Ins. ii. 389, 39. Ent. Syst. iv. 219, 44. Syst. Rhyn. 300, 44. Gmel. Ed. Syst. Nat. i. 2207, 25. Rossi, Faun. Etrusc. 264, 1396. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 707. Panz. Faun. Ins. Germ. xcv. 17. De la Rue, Ent. Forestière. Latr. Gen. iii. 173. Kirby and Spence, Intr. Ent. i. 325. St. Farg. et Serv. Enc. Meth. x. 247. Fonscol. Ann. Soc. Ent. x. 186, 28. Walk. Ann. Nat. Hist. Ser. 2, ii. 96, 34.

Aphis Pini maritimæ? Léon Dufour, Ann. Sci. Nat. iv. 243. Aphis nuda Pini, Deg. Ins. iii. 27, pl. 6, f. 9, 1—16.

Lachnus Pini, Hartig, Germ. Zeit. iii. 368. Kalt. Mon. Pflan. i. 155, 8.

Pityaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481.

Distance between the first and second veins at the base not more than one-eighth of that at the tips; third twice farther from the second at the tip than at the base, more than twice farther from the second at the base than the second is from the first; first fork at the tip much nearer to the second fork than to the third vein, very much nearer to the third vein than the third is to the second; second fork a little nearer to the fourth vein than it is to the first fork; fourth vein almost straight, about four times farther from the tip of the rib-vein than from the second fork.

a. Scotland. Presented by E. Doubleday, Esq. b-f. England. (In Canada Balsam). From Mr. Walker's collection.

# 36. APHIS PINICOLA.

Lachnus Pinicola, Kalt. Mon. Pflan. i. 154,7. Aphis Piniphila, Ratz. Forst. Ins. iii. 219, 26, pl. 11, f. 5. Aphis Pinicola, Walk. Ann. Nat. Hist. Ser. 2, ii. 98, 35.

Distance between the first and rib-veins at the base less than oneeighth of that between them at the tips; third much farther from the second at the tip than it is at the base, about thrice farther from the second at the base than the second is from the first; first fork at the tip very much nearer to the second fork than to the third vein, much nearer to the third vein than the third is to the second: second fork a little nearer to the fourth vein than to the first fork;

fourth vein very slightly curved, nearly four times farther from the rib-vein than from the second fork.

a-h. England. (In Canada Balsam). From Mr. Walker's collection.

## 37. APHIS PINETI.

Aphis Pineti, Fabr. Sp. Ins. ii. 389, 40. Mant. Ins. ii. 317, 45. Ent. Syst. iv. 219, 45. Syst. Rhyn. 301, 45. Gmel. Ed. Syst. Nat. 1, 2207, 55. Turt. Syst. Nat. ii. 707. Latr. Gen. iii. 173. St. Farg. et Serv. Enc. Méth. x. 248. Zett. Faun. Lapp. i. 558, 2. Ins. Lapp i. 310, 2. Walk. Ann. Nat. Hist. Ser. 2, ii. 99, 36.

Aphis tomentosa Pini, Deg. Ins. iii. 39, 2, pl. 6, f. 19—33. Lachnus Pineti, Hartig, Convers. Lexic. Germ. Zeit. iii. 368.

Kalt. Mon. Pflan. i. 162, 12.

Pinetisex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481.

Distance between the first and second veins at the tips about ten times farther than at the base; third mostly obsolete, much farther from the second at the tips than it is at the base; very much farther from the second at the base than the second is from the first; fourth vein almost straight, twice farther from the tip of the rib-vein than from the nearest visible part of the third vein.

a-m. England. (In Canada Balsam). From Mr. Walker's collection.

# 38. Aphis Abietis.

Aphis Abietis, Walk. Ann. Nat. Hist. Ser. 2, ii. 100, 37.

The viviparous wingless female. Elliptical, slightly convex, somewhat powdered with white, with cross rows of little black dots on the sutures between the segments: feelers pale yellow, slightly hairy, hardly more than one-fifth of the length of the body; tips brown: mouth with a black tip: front convex: sides of the forechest slightly notched.

The viviparous winged female. Feelers about one-third of the length of the body: angle near the tip of the wing-brand more obtuse than that of A. Pinicola, but less so than that of A. Pini, or of A. Pineti; fourth vein nearly straight; third vein obsolete near its source, forked before one-third, and again before two-thirds of its length; angles formed by these forks very

acute; tip of the second fork very near the tip of the fourth vein; first and second veins almost straight, near each other at the base, very far apart at the tips.

The winged male. Darker, much smaller, and more slender than the female, and has a broader head: feelers about half the length of the body.

England.

### 39. APHIS COSTATA.

Aphis costata, Zett. Faun. Lapp. i. 559, 3. Ins. Lapp. 311, 4. Walk. Ann. Nat. Hist. Ser. 2, ii. 100, 38.

Aphis Abietis? Kirby and Spence, Intr. Ent. i. 451, iii. 182, 465; iv. 171.

Lachnus fasciatus, Burm. Handb. Ent. ii. 93, 4. Kalt. Mon. Pflan. i. 160, 9.

Cinara Symphiti, Curt. Brit. Ent. 577.

Tæniolachnus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481.

Rib-vein approaching the fore border, and again receding much from it beneath the brand, forming a very obtuse angle; brand nearly as long as one-third of the wing; first branch vein straight, rather oblique, about five times farther from the second at the tip than it is at the base; second very oblique; third obsolete in the female, apparent but indistinct in the male, much nearer at its tip to the first fork than to the second vein; second fork long, not half so far at the tip from the fourth vein as from the second fork; fourth vein long, slightly curved, straight in the male.

a—f. England. (In Canada Balsam). From Mr. Walker's collection.

## 40. Aphis Laricis.

Aphis Laricis, Walk. Ann. Nat. Hist. Ser. 2, ii. 102, 39.

Distance between the first and second veins at the base about eight times that between them at the tips; third almost twice farther from the second at the tip than it is at the base, twice farther from the second at the base than the second is from the first; first fork more than twice farther from the third vein than from the second fork, nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth

vein almost straight, more than thrice farther from the tip of the rib-vein than from the second fork.

a—f. England. (In Canada Balsam). From Mr. Walker's collection.

### 41. APHIS JUNIPERI.

Aphis Juniperi, Fabr. Sp. Ins. ii. 388, 35. Mant. Ins. ii. 316, 40. Ent. Syst. iv. 218, 40. Syst. Rhyn. 300, 40. Gmel. Ed. Syst. Nat. i. 2205, 48. Deg. Ins. iii. 56, 7, pl. 4, f. 7—9. Schrank, Faun. Boic. ii. 1, 119, 1230. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 707. Walk. Ann. Nat. Hist. Ser. 2, ii. 103, 40.

Lachnus Juniperi, Kalt. Mon. Pflan. i. 153, 6. Juniperifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481.

Distance between the first and second veins at the tips about four times that between them at the base; third obsolete till near the tips; second fork a little nearer to the first fork than to the fourth vein; fourth vein almost straight, twice farther from the tip of the rib-vein than from the second fork.

a-o. England. (In Canada Balsam). From Mr. Walker's collection.

## 42. APHIS SUBMACULA.

Aphis submacula, Walk. Ann. Nat. Hist. Ser. 2, ii. 104, 41.

Distance between the first and second veins at the tips nearly eight times that between them at the base; third as near to the second at the tip as it is at the base, more than thrice farther from the second at the base than the second is from the first; first fork much nearer to the second fork than to the third vein, farther from the third vein than the third is from the second; second fork as near to the first fork as to the fourth vein; fourth vein much curved near the base, almost straight towards the tip, a little more than twice farther from the tip of the rib-vein than from the second fork.

England, Switzerland.

## 43. APHIS SALIGNA.

Aphis saligna, Sulzer, Ins. pl. 11, f. 6. Gmel. Ed. Syst. Nat. i. 2209, 62. Walk. Ann. Nat. Hist. Ser. 2, ii. 105, 42. Aphis salicina? Zett. Ins. Lapp. i. 311, 6. Aphis viminalis, Fonscol. Ann. Soc. Ent. Fr. x. 184, 27.

Rib-vein very slightly approaching the fore border, hardly again receding from it, not forming an angle; brand near one-third of the length of the wing; first branch-vein oblique, almost straight, six times farther from the second at the tip than it is at the base; second very oblique, not half as far at the base from the first as it is from the third, but very much farther at the tip; third almost straight, more oblique than the second, and twice farther from it at the tip than at the base; forks very long; first at the tip as far from the second fork as from the third vein, and nearer to them than the third vein is to the second; second fork not half so far from the fourth vein as it is from the first fork; fourth vein long, very slightly curved.

The viviparous wingless female. Brown, with a slight gray stripe along the back, and a double row of black spots on each side, increasing in breadth from the head till near the tip of the abdomen, with a slight bronze tint, covered beneath with gray powder: feelers black, nearly one-third of the length of the body; third joint yellow: mouth pale yellow, black at the base and towards the tip, extending somewhat beyond the hind hips: tubercles black; legs stout, long, black; thighs, except their tips, and shanks at the base yellow. When young it is duller and paler; the feelers, the fore-shanks and the middle-shanks are yellow with black tips.

Europe.

# 44. Aphis Roboris.

Aphis Roboris, Linn. Syst. Nat. ii. 735, 22. Faun. Suec. 993. Fabr. Sp. Ins. ii. 388, 37. Mant. Ins. ii. 317, 42, 1. Ent. Syst. iv. 218, 42. Syst. Rhyn. 300, 42. Schrank, Faun. Boic. ii. 1, 112, 1209. Gmel. Ed. Syst. Nat. i. 2207, 22. Turt. Syst. Nat. ii. 707. Fonscol. Ann. Soc. Ent. Fr. x. 183, 26. Walk. Ann. Nat. Hist. Ser. 2, ii. 106, 43.

Aphis longipes, Léon Dufour, Réch. Hémipt. Mém. de l'Institut

iv. 243, pl.9, f. 116, 117.

Cinara Roboris, Curt. Brit. Ent. xii. 576. Sir Oswald Mosley, Gard. Chron. i. 747.

Lachnus Roboris, Kalt. Mon. Pflan. i. 148, 2.

Dryaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481.

Rib-vein slightly approaching the fore border, and again receding from it beneath the brand, forming no angle, but slightly curved towards its tip; brand full as long as one-fourth of the wing; first branch-vein slightly undulating, very slightly oblique, six times farther from the second at the tip than it is at the base; second very oblique, slightly undulating, more than twice farther from the third than from the first at the base, but much nearer at the tip; third almost straight, very oblique, much farther from the second at the tip than it is at the base; first fork at the tip as far from the second fork as from the third vein, and much nearer to them than the third vein is to the second; second fork very long, slightly undulating, nearer at the tip to the fourth vein than to the first fork; fourth vein long, much curved near the base, straight from thence to the tip.

a-c. England. Presented by F. Walker, Esq.
 d-i. England. (In Canada Balsam). From Mr. Walker's collection.

## 45. Aphis agilis.

Lachnus agilis, Kalt. Mon. Pflan. i. 161, 11. Aphis agilis, Walk. Ann. Nat. Hist. Ser. 2, ii. 108, 44.

Distance between the first and second veins at the tips about thrice that between them at the base; third vein mostly obsolete; fourth vein almost straight, about thrice farther from the tip of the rib-vein than from the second fork.

a-e. England. (In Canada Balsam). From Mr. Walker's collection.

Group —— ?
46. Aphis —— ?

Aphis Tiliæ, Enc. Méth. Hist. Nat. Ins. pl. 117, f. 2, 4. France.

### 47. Aprils ——?

Lachnus Roboris, Hartig, Germ. Zeit. Ent. iii. 368, 6. Hartz.

## 48. Aphis pruinosus.

Lachnus pruinosus, Hartig, Germ. Ent. Zeit. iii. 368, 5. Prussia.

## 49. Aphis ----?

Lachnus Padi, Hartig, Germ. Zeit. Ent. iii. 368, 4. Germany.

### 50. APHIS CARYÆ.

Aphis Caryæ, Harris, Cat. Ins. Mass. Ins. New Engl. 190. United States.

#### 51. APHIS SALICTI.

Aphis Salicti, Harris, Ins. New Engl. 191. United States.

# Group 19.

## 52. Aphis Quercus.

Aphis Quercûs, Linn. Syst. Nat. ii. 735, 24. Fabr. Sp. Ins. ii. 388, 38. Mant. Ins. ii. 317, 43. Ent. Syst. iv. 219, 43. Syst. Rhyn. 300, 43. Gmel. Ed. Syst. Nat. i. 2207, 24. Réaum. Ins. iii. 334, pl. 28, f. 5—14. Geoff. Ins. Par. i. 498, 14. Schrank, Faun. Boic. ii. 112, 1238. Rossi, Faun. Etrusc. 263, 1395. Enc. Méth. Hist. Nat. Ins. pl. 118, f. 1—10. Huber, Hist. Nat. Fourm. 195. Bonnet, Hist. Nat. i. 3. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 111.

Aphis longirostris, Fabr. Mant. Ins. ii. 314, 1. Ent. Syst. iv. 210, 1. Syst. Rhyn. 294, 1. Gmel. Syst. Nat. i. 2201, 34.

Lachnus Quercus, Burm. Handb. Ent. ii. 92, 3. Kalt. Mon. Pflan. i. 164, 13. Ratz. Forst. Ins. iii. 220, 27.

Phylloxera longirostris, Fonscol. Ann. Soc. Ent. Fr. x. 197, 2. Lachnus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 480.

The winged female. Wings a little longer than the body, slightly brown; veins brown, strongly marked; first short, curved; second forked at about half its length, not quite springing from the rib-vein; fourth curved, diverging from the third.

a—d. England. (In Canada Balsam). From Mr. Walker's collection.

## Group 20. Walk. Ann. Nat. Hist. Ser. 2, ii. 190.

### 53. APHIS ROSÆ.

Aphis Rosæ, Linn. Syst. Nat. ii. 734, 9. Faun. Suec. 982. Fabr. Sp. Ins. ii. 387, 25. Mant. Ins. ii. 316, 30. Ent. Syst. iv. 217, 30. Syst. Rhyn. 298, 30. Réaum. Ins. iii. pl. 21, f. 1-4. Deg. Ins. iii. 65, 10, pl. 3, f. 1-4. Rossi, Faun. Etrusc. 262, 1386. Gotz. Ent. Beitr. ii. 296, 9. Sulz. Ins. pl. 12, f. 79. Lederm. Micr. 53, pl. 25. Gmel. Ed. Syst. Nat. i. 4, 2204, 9. Schrank, Faun. Boic. iii. 117, 1222. Harris, Exposit. Engl. Ins. 66, pl. 17, f. 1-3. Dr. Richardson, Phil. Trans. lxi. 121. Bonnet, Hist. Nat. i. 48. Berk. Syn. i. 119. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 706. Shaw, Gen. Zool. vi. 171, pl. 58, f. med. Bingley, Hist. Nat. iii. 186. Wood, Ill. Linn. Gen. Ins. i. 112, pl. 39. Latr. Gen. iii. 173. Enc. Brit. 7th Edit. ix. 205. Kirby and Spence, Intr. Ent. ii. 436-454. Enc. Méth. i. pl. 17, f. 1. St. Farg. et Serv. Enc. Méth. x. 240, 4. Lamarck, Anim. sans Vert. 2me Edit. iv. 122. Westw. Mag. Nat. Hist. vi. 492. Haliday, Ent. Mag. ii. 78. Duf. Rech. Hém. Mém. Inst. iv. 242. Kyber, Germ. Zeit. ii. 2, 3. Burm. Handb. Ent. ii. 94, 2. Sir Oswald Mosley, Gard. Chron. i. 628. Fonscol. Ann. Soc. Ent. Fr. x. 168, 8. Kalt. Mon. Pflan.i. 3, 1. Harris, Ins. New Engl. 190. Blanch. Hist. Nat. Ins. 206, 11. Guér. Icon. Règ. Anim. i. pl. 59, f. 15. Amyot et Serv. Hist. Nat. Hém. 609, 1. Walk. Ann. Nat. Hist. Ser. 2, ii. 192, 45.

Aphis Dipsaci, Schrank, Faun. Boic. ii. 104, 1181. Aphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 474, i. 516.

Distance between the first and second veins at the tips almost twice that between them at the base; third farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork at the tip a little nearer to the second fork than to the third vein, nearer to the third vein than the

third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein curved near the base, almost straight towards the tip, much farther from the tip of the rib-vein than from the second fork.

a—i. Scotland. Presented by E. Doubleday, Esq.
 j—dd. England. (In Canada Balsam). From Mr. Walker's collection.

### 54. Aphis Sonchi.

Aphis Sonchi, Linn. Syst. Nat. ii. 735, 15. Fabr. Sp. Ins. ii. 390, 48. Mant. Ins. ii. 317, 53. Ent. Syst. iv. 220, 53. Syst. Rhyn. 302, 53. Geoff. Ins. Par. i. 497, 13. Réaum. Ins. iii. 333, pl. 22, f. 3—5. Gmel. Ed. Syst. Nat. i. 4,2205, 15. Schrank, Faun. Boic. ii. 1, 120, 1232. Rossi, Faun. Etrusc. 265, 1402. Nouv. Dict. d' Hist. Nat. xxviii. 254. Kalt. Mon. Pflan. i. 28, 17. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 708. Sir Oswald Mosley, Gard. Chron. i. 628. Walk. Ann. Nat. Hist. Ser. 2, ii. 197, 46. Zool. vi. 2246, 2248.

Sonchifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475, 519.

Aphis Serratulæ, Linn. Faun. Suec. 987. Schrank, Faun. Boic. ii. 1, 122, 1238. Kalt. Mon. Pflan. i. 26, 15.

Serratulifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475.

Aphis Jaceæ, Linn. Faun. Suec. 991. Gmel. Ed. Syst. Nat. i. 4,2206, 20. Scopoli, Ent. Carn. 148, 403. Schrank, Faun. Boic. ii. 1, 124, 1244. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 708. Kalt. Mon. Pflan. i. 26, 15.

Jaceifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475.

Aphis Picridis, Fabr. Syst. Ent. 737, 22. Sp. Ins. ii. 387, 27.

Mant. Ins. ii. 316, 32. Ent. Syst. iv. 217, 32. Syst. Rhyn.
299, 32. Gmel. Ed. Syst. Nat. i. 4, 2204, 43. Schrank, Faun.
Boic. ii. 121, 1235. Kalt. Mon. Pflan. i. 27, 16.

Picridifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475.

Aphis Cirsii, Linn. Faun. Suec. 987. It. W. Goth. 307. Gmel. Ed. Syst. Nat. i. 4, 2205, 16. Scop. Ent. Carn. 138, 402. Stew. El. Nat. Hist. ii. 110.

Aphis Cnici, Schrank, Faun. Boic. ii. 122, 1239.

Aphis Solidaginis, Fabr. Sp. Ins. ii. 384, 4. Mant. Ins. ii. 315, 5. Ent. Syst. iv. 211, 5. Syst. Rhyn. 295, 5. Gmel. Ed. Syst. Nat. i. 4, 2202, 38. Hausmann, Ill. Mag. i. 442, 5. Kalt. Mon. Pflan. i. 32, 20.

Solidaginifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475.

Aphis Cardui? Kyber, Germ. Zeit. ii. 2. Kirby and Spence, Intr. Ent. ii. 436. Fonscol. Ann. Soc. Ent. Fr. x. 170, 11. Sir Oswald Mosley, Gard. Chron. i. 628.

Aphis Campanulæ, Kalt. Mon. Pflan. i. 26, 14. Aphis Taraxaci, Kalt. Mon. Pflan. i. 30, 18.

Cinara Jaceæ? Sir Oswald Mosley, Gard. Chron. i. 747.

Distance between the first and second veins at the base not half that between them at the tips; third farther from the second at the tip than it is at the base, as far from the second at the base as the second is from the first; first fork at the tip much nearer to the second fork than to the third vein, a little nearer to the third than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved near the base, straight from thence to the tip, twice farther from the tip of the rib-vein than from the second fork.

Var. Fourth feeler-joint much shorter than the third; fifth much shorter than the fourth; sixth rather more than one-third of the fifth; seventh longer than the fifth.

Presented by F. Walker, Esq. a—d. England.

e-h. England.

i-p. England. (In Canada Balsam). From Mr. Walker's collection.

# 55. APHIS MILLEFOLII.

Aphis Millefolii, Fabr. Sp. Ins. ii. 386, 16. Mant. Ins. ii. 316, 20. Ent. Syst. iv. 214, 17. Syst. Rhyn. 296, 17. Deg. Ins. iii. 60, 9, pl. 4, f. 1-5. Gmel. Ed. Syst. Nat. i. 4, 2206, 50. Schrank, Faun. Boic. ii. 123, 1243. Götze, Ent. Beitr. 317, 29. Stew. El. Nat. Hist. ii. 110. Shaw, Gen. Zool. vi. 170, pl. 58, f. sup. dext. Latr. Gen. Crust. iii. 173. St. Farg. et Serv. Enc. Méth. x. 246. Kalt. Mon. Pflan. i. 10, 2. Sir Oswald Mosley, Gard. Chron. i. 684.

Achillaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 474, 2, 517. Aphis Achilleræ? Fabr. Sp. Ins. ii. 385, 14. Mant. Ins. ii. 315, 16.

Ent. Syst. iv. 213, 15. Syst. Rhyn. 296, 15. Gmel. Ed. Syst. Nat. i. 2205, 49. Kalt. Mon. Pflan. i. 141, 110.

Aphis Althæa? Harris, Exposit. Engl. Ins. 66, pl. 17, f. 7-9.

Distance between the first and second veins at the tips more than that between them at the base; third very little farther from the second at the tip than at the base, hardly farther from the second at the base than the second is from the first; first fork much farther at

the tip from the second fork than it is from the third vein, nearer to the third vein than the third is to the second; second fork much nearer to the fourth vein than to the first fork; fourth vein much curved near the base, very slightly curved from thence to the tip.

Var. Fourth joint of the feelers much shorter than the third; fifth shorter than the fourth; sixth less than half the length of the fifth; seventh longer than the fifth.

a-h. England. Presented by F. Walker, Esq.

i—l. England. (In Canada Balsam). Presented by F. Walker, Esq.

#### 56. Aphis Absinthii.

Aphis Absinthii, Linn. Syst. Nat. ii. 735, 19. Faun. Suec. 991. Fabr. Mant. Ins. ii. 315, 19. Ent. Syst. iv. 214, 20. Syst. Rhyn. 297, 20. Gmel. Ed. Syst. Nat. i. 5, 2206, 19. Bonnet, Hist. Nat. i. 7. Scop. Ent. Carn. 137, 401. Müll. Zool. Dan. Prod. 1270. Schrank, Faun. Boic. ii. 123, 1240. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 705. Burm. Handb. Ent. ii. 95, 4. Kalt. Mon. Pflan. i. 31, 19. Walk. Ann. Nat. Hist. Ser. 2, ii. 202, 48.

Aphis Tauaceti, Linn. Syst. Nat. ii. 735, 18. Faun. Suec. 989. Gmel. Ed. Syst. Nat. i. 4, 2205, 18. Fabr. Sp. Ins. ii. 387, 31. Mant. Ins. ii. 316, 36. Ent. Syst. iv. 217, 36. Syst. Rhyn. 299, 36. Geoff. Ins. Par. i. 496, 8. Schrank, Faun. Boic. ii. 123, 1241. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 706. Burm. Handb. Ent. ii. 14, 3. Kalt. Mon. Pflan. i. 47, 33. Sir Oswald Mosley, Gard Chron. i. 684. Aphis Balsamitæ, Mill. Zool. Dan. Prod. 109, 1252. Gmel. Ed.

Syst. Nat. i. 5, 2210, 71.

Aphis Artemisiæ, Fonscol. Ann. Soc. Ent. Fr. x. 162, 1. Absinthifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475. Tanacetifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 476, 521.

Distance between the first and second veins more than twice farther at the tips than at the base; much nearer to the second at the base than at the tip, a little farther from the second at the base than the second from the first; first fork farther at the tip from the second fork than it is from the third vein, nearer to the third vein than the third vein is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein much curved near the base, slightly curved from thence to the tip,

very much nearer to the second fork than to the tip of the rib-

Var. First fork nearer at the tip to the second fork than to the third vein; second fork as near to the fourth vein as to the first fork.

a. Scotland. Presented by E. Doubleday, Esq.
 b-v. England. (In Canada Balsam). From Mr. Walker's collection.

## 57. APHIS ULMARIÆ.

Aphis Ulmariæ, Schrank, Faun. Boic. ii. 111, 1221. Walk. Ann. Nat. Hist. Ser. 2, ii. 421, 49. Zool. vii. App. liii. Aphis Onobrychis, Fonscol. Ann. Soc. Ent. x. 169, 9. Aphis Lathyri, Sir Oswald Mosley, Gard. Chron. i. 684.

Aphis Pisi, Kalt. Mon. Pflan. i. 23, 11.

Aphis Pisum, Harris, Exposit. Engl. Ins. 66, pl. 17, f. 10-12.

Distance between the first and second veins at the base less than half that between them at the tips; third a little farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved near the base, straight towards the tip, almost twice farther from the tip of the ribvein than from the second fork.

Var. Third vein a little nearer to the second at the base than the second is to the first.

Var. The viviparous wingless female. — Grass-green, nearly spindle-shaped, rather long and narrow, convex, smooth, slightly shining: feelers pale yellow, longer and much longer than the body; tips of the third and fourth, and the whole of the latter joints brown, or with the tips of all the joints and the whole of the seventh joint brown: mouth pale yellow or pale green, with a black or brown tip: nectaries like the mouth in colour, as long as one-fourth or as one-fifth of the body: legs pale green or pale yellowish green; knees, feet and tips of shanks brown or black.

a. Scotland. Presented by E. Doubleday, Esq.
b—m. England. Presented by F. Walker, Esq.
n—bb. England. (In Canada Balsam). From Mr. Walker's collection.

#### 58. Aphis Rubi.

Aphis Rubi, Kalt. Mon. Pflan. i. 24, 12. Réaum. Ins. iii. 319. Walk. Ann. Nat. Hist. 2nd Série, ii. 423, 50. Zool. vii. App. liv.

Var. Third vein wanting after the emission of its first fork. Second fork and tip of the first wanting.

Distance between the first and second veins much more than twice farther at the tip than at the base; third much farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork very much farther at the tip from the second fork than from the third vein, much nearer to the third vein than the latter is to the second vein; fourth vein nearly straight towards the tip, much curved, much farther from the tip of the rib-vein than from the second fork.

a-f. England. Presented by F. Walker, Esq.
 g-w. England. (In Canada Balsam). From Mr. Walker's collection.

## 59. APHIS URTICÆ.

Aphis Urticæ, Fabr. Ent. Syst. iv. 217, 35. Syst. Rhyn. 299, 35. Schrank, Faun. Boic. 106, 1186. Scop. Ent. Carn. 139, 15. Kalt. Mon. Pflan. i. 13, 4. Walk. Ann. Nat. Hist. Ser. 2, ii. 427, 51. Zool. vii. App. liv.

Aphis Urticata? Fabr. Sp. Ins. ii. 387, 30. Mant. Ins. ii. 316, 35.

Gmel. Ed. Syst. Nat. i. 4, 2204, 46.

Urticifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 475.

Var. Third vein wanting after the emission of its first fork.

Distance between the first and second veins twice farther at the tips than at the base; third much farther from the second at the tip than it is at the base, a little nearer to the second at the base than the second is to the first; first fork farther at the tip from the second fork than from the third vein, very much nearer to the third vein than the third is to the second; fourth vein curved, straight towards the tip, much farther from the tip of the rib-vein than from the second fork.

Var. Third vein nearly twice farther from the second at the tip than it is at the base, a little farther from the second at the base than the second is from the first; first fork not one-third so far from the third vein as the third is from the second.

a-f. Scotland. Presented by E. Doubleday, Esq.
 g-t. England. (In Canada Balsam). From Mr. Walker's collection.

## 60. Aphis Vincæ.

Aphis Vincæ, Walk. Ann. Nat. Hist. Ser. 2, ii. 429, 52. a, b. England. Presented by F. Walker, Esq.

### 61. APHIS MALVÆ.

Aphis Malvæ, Sir Oswald Mosley, Gard. Chron. i. 684. Walk. Ann. Nat. Hist. Ser. 2, ii. 429, 53. Zool. vii. App. xlvii. Aphis Pelargonii, Kalt. Mon. Pflan. i. 21, 10. Aphis Bellidis? Sir Oswald Mosley, Gard. Chron. i. 684. Aphis hibernaculorum? Fonscol. Ann. Soc. Ent. Fr. x. 181, 23.

Distance between the first and second veins more than twice farther at the tips than at the base; third hardly farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork at the tip nearer to the second fork than to the third vein, a little farther from the third vein than the third is from the second; second fork a little farther from the first than from the fourth vein; fourth vein curved, much farther from the tip of the rib-vein than from the second fork.

Var. First fork a little nearer to the third vein than the third is to the second.

Var. 1? The viviparous wingless female. — Oval, convex, pale greenish yellow, smooth, shining; feelers pale yellow, darker towards the tips, much longer than the body: mouth and nectaries pale yellow, with black tips, the latter as long as one-third of the body: legs very pale yellow; feet black. From Myosotis.

Var. 2? Green, smooth, shining: feelers black towards the tips: nectaries a little more than one-fourth of the length of the body: thighs pale green; knees brown; tips of the shanks black. From Tussilago Farfara.

Var. 3? Feelers brown, pale at the base, a little longer than the body: mouth and nectaries yellow, with brown tips, the latter

are between one-fourth and one-fifth of the length of the body; legs pale yellow; feet and tips of shanks brown. The young ones when just born are light.

- Var. 4? Pale yellow, rather broad and flat, with a row of black dots along each side, and a large lively green spot at the base of each nectary: feelers pale yellow, much longer than the body; tips of the joints black: mouth and nectaries pale yellow, with black tips, the latter as long as one-fourth of the body: legs pale yellow; knees, feet, and tips of the shanks black.
- Var. 5? Like the last, grass-green, tinged with yellow: head and fore-chest yellow. From Digitalis.
- Var. 6? Dull pale or grass-green: hind part of the abdomen deep green on each side: feelers yellowish green, longer than the body; tips of the second and of the third joints and the whole of the following joints brown: mouth and nectaries yellowish green with brown tips, the latter nearly one-fifth of the length of the body: legs yellowish green; knees, feet, and tips of shanks brown. From Tussilago Farfara.
- Var. 7? Head and fore-chest yellow: feelers pale yellow, much longer than the body; tips of the joints black: mouth pale yellow, with a black tip: tube at the tip of the abdomen and nectaries yellow, the latter rather more than one-fourth of the length of the body. From Rumex crispus and other species.
- Var. 8? Like the last: feelers very much longer than the body: nectaries with black tips, as long as one-third of the body: legs pale yellow; feet and tips of the shanks black.
- Var. 9? Body pale green: feelers dark brown, yellowish green at the base, fully as long as the body: mouth and nectaries pale green with brown tips, the latter about one-fifth of the length of the body: legs pale yellow; feet and tips of thighs and of shanks dark brown.
- Var. 10? Feelers and mouth very pale green; tip of the latter and tips of the joints of the former black: nectaries pale green, with black tips: legs very pale green; feet and tips of shanks black.
- Var. 11? Pale yellow, with a row of impressions on each side, sometimes with a pale green tinge on the hind part: feelers pale yellow, a little longer than the body; tips of the joints brown:

mouth and nectaries pale yellow with brown tips, the latter about one-fifth of the length of the body: legs pale yellow; knees sometimes brown; feet and tips of shanks brown.

- Var. 12? Pale red, varied with yellow, while a pupa: head pale yellow: feelers black, pale yellow towards the base, longer than the body: mouth pale yellow, with a black tip. Winged insect buff: head and the lobes of the chest and of the breast brown: abdomen green, with a row of brown spots on each side: feelers black, longer than the body: mouth pale yellow, with a black tip: nectaries black, as long as one-fourth of the body: legs pale yellow; feet and tips of thighs and of shanks black: wingribs and rib-veins pale yellow: brands and veins brown.
- Var. 13? Green: head, disk of chest, and feelers brown: disk of breast black: abdomen with black bands.
- Var. 14? Pale green: head and disks of chest and of breast pale brown: feelers black: nectaries pale green, about one-fifth of the length of the body: legs pale green; feet and tips of shanks black.
- Var. 15? Black: feelers a little longer than the body: abdomen rather dark green: nectaries dull green, nearly one-sixth of the length of the body: legs yellow; feet and tips of thighs and of shanks black: wings very much longer than the body; wingribs and rib-veins yellow; brands and branch-veins pale brown.
- Var. 16? Mouth and nectaries pale green, with darker tips, the latter as long as one-fourth of the body: legs pale green; feet and tips of thighs and of shanks brown: wing-ribs and rib-veins pale green; the other veins brown. On the cowslip, in the beginning of May.
- Var. 17? Head and disk of chest dull reddish buff: feelers brown, dull green at the base: mouth pale green, with a brown tip: nectaries yellow, with brown tips, from one-third to one-fifth of the length of the body: feet and tips of shanks brown: wing-ribs, rib-veins, and brands pale yellow; the other veins pale brown. The pupa has pale yellow or pale yellowish green rudimentary wings.

Variation in the wing-veins.—Second fork of third vein wanting.

a—m. England. (In Canada Balsam). From Mr. Walker's collection.

#### 62. APHIS PALLIDA.

Aphis pallida, Walk. Ann. Nat. Hist. Ser. 2, ii. 430, 54.

Distance between the first and second veins at the tips about thrice that between them at the base; third hardly farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork as near to the second fork as to the third vein, nearer to the third vein than the third is to the second; second fork much nearer to the fourth vein than to the first fork; fourth vein curved, almost straight towards the tip, nearly twice farther from the tip of the rib-vein than from the second fork.

a-g. England. (In Canada Balsam). From Mr. Walker's collection.

#### 63. APHIS FRAGARIÆ.

Aphis Fragariæ, Walk. Ann. Nat. Hist. Ser. 2, ii. 431, 55.

Var.? The viviparous winged female. Pupa elliptic, yellowish grass-green, with a lively green stripe down the middle of the body: feelers pale yellow, longer than the body; tips of the joints black: mouth pale yellow with a black tip: nectaries very pale yellow, pale green at the base, black at the tips, and nearly one-third of the length of the body: legs long, very pale green or almost white; knees, feet, and tips of shanks black. When winged it is black: the fore and the hind border of the fore-chest and the fore-breast dull greenish yellow, as is also the abdomen: feelers longer than the body: mouth dull yellow, with a black tip: nectaries black, and full one-fourth of the length of the body: legs yellow; feet and tips of thighs and of shanks black: wings very much longer than the body; wing-ribs yellow; wing-brand and veins brown.

England.

## 64. Aphis dirhoda.

Aphis dirhoda, Walk. Ann. Nat. Hist. Ser. 2, iii. 43, 56. Hardy, North British Agriculturist, ii. 707.

Distance between the first and second veins at the base much less than half that between them at the tips; third very little

farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork a little nearer to the second fork at the tip than it is to the third vein, and a little nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved near the base, straight towards the tip, farther from the tip of the rib-vein than from the second fork.

Var. Second fork nearer to the fourth vein than to the first fork; fourth vein nearer to the tip of the rib-vein than to the second fork.

Var. Second fork wanting.

a-r. England. (In Canada Balsam). From Mr. Walker's collection.

#### 65. APHIS AVENÆ.

Aphis Avenæ, Fabr. Sp. Ins. ii. 386, 17. Syst. Ent. 736, 15. Mant. Ins. ii. 316, 22. Ent. Syst. iv. 214, 22. Syst. Rhyn. 297, 21. Schrank, Faun. Boic. ii. 1, 104. Gmel. Ed. Syst. Nat. i. 4, 2206, 52. Villers, Ins. 551, 50. Stew. El. Nat. Hist. ii 110. Turt. Syst. Nat. ii. 705. Macquart, Ann. Sci. Nat. 1831, 468. Kalt. Mon. Pflan. i. 108, 6. Walk. Ann. Nat. Hist. Ser. 2, iii. 45, 57. Hardy, North British Agriculturist, ii. 596. Aphis granaria, Kirby, Linn. Trans. iv. 238. Curtis, Journ. Roy. Agric. Soc. vi.

Aphis Hordei, Kyber, Germ. Mag. Zeit. ii. Aphis cerealis, Kalt. Mon. Pflan. i. 16, 6.

Bromaph's, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

Distance between the first and second veins at the base less than half that between them at the tips; third farther from the second at the tip than it is at the base, as near to the second at the base as the second is to the first; first fork nearer to the second fork than to the third vein, nearer to the third vein than the third vein is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein much curved near the base, almost straight towards the tip, very much nearer to the second fork than to the tip of the ribvein.

Var. Seventh joint of the feelers a little shorter than the third. a—o. England. (In Canada Balsam). From Mr. Walker's collection.

### 66. Aphis Hieracii.

Aphis Hieracii, Schrank, Faun. Boic. ii. 121, 1233. Kalt. Mon. Pflan. i. 17, 7. Walk. Ann. Nat. Hist. Ser. 2, iii. 47, 58.

Distance between the first and second veins at the base much more than twice that between them at the tips; third farther from the second at the tip than it is at the base, much farther from the second at the base than the second is from the first; first fork as far from the second as from the third vein, much nearer to the third vein than the third is to the second; second fork as far from the first fork as from the fourth vein; fourth vein curved near the base, straight towards the tip, much farther from the tip of the rib-vein than from the second fork.

Var. Grayish green, blackish on the back, rather small, oval, convex, shining, and semipellucid: feelers black, much longer than the body: mouth pale yellow, with a black tip: nectaries dull green, with black tips, as long as one-fifth of the body: legs pale yellow; hind shanks dull yellow; feet and tips of thighs and of shanks black.

a-y. England. (In Canada Balsam). From Mr. Walker's collection.

## 67. Aphis Asteris.

Aphis Asteris, Walk. Ann. Nat. Hist. Ser. 2, iii. 48, 59. a—d. England. (In Canada Balsam). Presented by F. Walker, Esq.

## 68. APHIS LACTUCE.

Aphis Lactucæ, Linn. Syst. Nat. ii. 335, 14. Réaum. Ins. iii. pl. 22, f. 3—5. Bonnet, Hist. Nat. i. 6. Fabr. Sp. Ins. ii. 390, 47. Mant. Ins. ii. 317, 52. Ent. Syst. iv. 220, 52. Syst. Rhyn. 301, 52. Gmel. Ed. Syst. Nat. i. 2205, 14. Rossi, Faun. Etrusc. 264, 1401. Schrank, Faun. Boic. ii. 1, 120, 1233. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 708. Enc. Méth. Hist. Nat. Ins. pl. 118, f. 11—13. Fonscol. Ann. Soc. Ent. x. 170, 10. Kalt. Mon. Pflan. i. 37, 25. Walk. Ann. Nat. Hist. Ser. 2, iii. 49, 60. Zool. vii. App. liv., lvii. Aphis Ribis Nigri, Sir Oswald Mosley, Gard. Chron. i. 684.

Distance between the first and second veins at the base much less than half that between them at the tips; third a little farther from the second at the tip than it is at the base, as far from the second at the base as the second is from the first; first fork very much nearer to the second at the tip than it is to the third vein, and nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved near the base, almost straight from thence to the tip, much farther from the tip of the rib-vein than from the second fork.

Var. Small, very pale green, rather flat, slightly increasing in breadth from the head to the tip of the abdomen: head almost white: a large green spot at the base of each nectary: feelers white, much longer than the body; tip of each joint black: mouth almost white, with a black tip: nectaries almost white, with black tips, nearly one-fourth of the length of the body: legs almost white; knees brown; feet and tips of shanks black. On Lapsana communis, before the middle of October.

The viviparous winged female. Grass-green: head and chest black above and below: fore border and hind border of fore-chest green: a row of black spots on each side of the abdomen: feelers black, a little longer than the body: mouth pale yellow, with a black tip: nectaries black, as long as one-fourth of the body: legs pale yellow, rather long; feet and tips of thighs and of shanks black: wings colourless, much longer than the body; wing-ribs and ribveins pale yellow; brand pale buff; branch-veins brown, their tips slightly clouded.

Var.? Oval, yellowish green, or greenish yellow, and often varied with pale red, head sometimes yellow: feelers pale yellow, darker towards their tips, or black, with a pale yellow base, a little longer than the body: mouth pale yellow, with a black tip; nectaries pale yellow, as long as one-third or one-fourth of the body, with black tips: legs yellow or pale yellow; feet and tips of shanks black.

The viviparous winged female. Small and gray: head, middle-chest, and middle-breast black: fore-chest pale red, its disk darker: feelers black, longer than the body: mouth pale yellow, with a black tip: nectaries pale yellow, with black tips, and more than one-fourth of the body: legs pale yellow; feet and tips of thighs and of shanks black: wings colourless, very much longer than the body; rib-veins pale yellow; brand pale brown; branch-veins brown. From Cnicus arvensis.

Var.? The viviparous wingless female. Small, oval, smooth, dull black or red, dark green towards the hind part of the abdomen: head sometimes pale yellow: feelers pale yellow, black towards the tips, and rather shorter than the body: mouth pale yellow; its tip and the eyes black: nectaries dull pale yellow, with black tips, as long as one-fourth of the body: legs dull pale yellow; knees, feet, and tips of shanks black. On Lapsana communis, before the middle of October.

Variation in the wing-veins. An additional fork at the second division of the third vein.

a-p. England. (In Canada Balsam). From Mr. Walker's collection.

### 69. Aphis Ribis.

Aphis Ribis, Linn. Syst. Nat. ii. 733, 1. Faun. Suec. 977. Fabr. Syst. Ent. 734, 5. Sp. Ins. ii. 385. Mant. Ins. ii. 315, 7. Ent. Syst. iv. 211, 7. Syst. Rhyn. 295, 7. Müll. Fn. Frid. 29, 276. Frisch. Ins. ii. 9, pl. 14. Réaum. Ins. iii. 281—350, pl. 22, f. 7—10. Hausm. Ill. Mag. i. 437, 2. Leeuwenh. Arc. Ep. 90, 545, 548. Blanch. Ins. 164, pl. 14, f. 52. Gmel. Ed. Syst. Nat. i. 2201, 1. Schrank, Faun. Boic. ii. 1, 108, 1195. Berk. Syn. i. 119. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 703. Kalt. Mon. Pflan. i. 39, 26. Sir Oswald Mosley, Gard. Chron. i. 628. Walk. Ann. Nat. Hist. Ser. 2, iii. 295, 61.

Ribifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 476, 520.

Distance between the first and second veins at the base much less than half that between them at the tips; the third farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork at the tip as near to the second fork as to the third vein, much nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein curved near the base, straight towards the tip, very much nearer to the second fork than to the rib-vein.

a-f. Scotland. Presented by E. Doubleday, Esq.
 g-ee. England. (In Canada Balsam). From Mr. Walker's collection.

#### 70. APHIS GALEOPSIDIS.

Aphis Galeopsidis, Kalt. Mon. Pflan. i. 35, 23. Walk. Ann. Nat. Hist. Ser. 2, iii. 298, 62. Zool. vi. 2251.

Distance between the first and second veins at the tips more than twice that between them at the base; third very much farther from the second at the tip than it is at the base, a little nearer to the second at the base than the second is to the first; first fork at the tip nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork much farther from the fourth vein than from the first fork; fourth vein curved near the base, straight towards the tip, very much nearer to the second fork than to the tip of the rib-vein.

Var. First fork a little nearer to the third vein than to the second fork.

Var.? The viviparous winged female. Head, disk of the forechest, of the middle-chest, and of the middle-breast brown: a few slight black bands on the disk of the abdomen: feelers black, a little longer than the body: mouth yellow, with a black tip: nectaries pale yellow, with black tips, as long as one-sixth of the body: legs pale yellow; knees, feet, and tips of shanks black: wings colourless, and much longer than the body; wing-ribs pale yellow; rib-veins and the wing-bands pale brown; the other veins brown. From Polygonum Persicaria, in October.

a-o. England. (In Canada Balsam). From Mr. Walker's collection.

### 71. APHIS ABIETINA.

Aphis Abietiua, Walk. Ann. Nat. Hist. Ser. 2, iii. 301, 63.

Two foveæ on the head.

Distance between the first and second veins about thrice farther at the tips than at the base; third farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork much nearer to the third vein than to the second fork, not half so far from the third as the third is from the second; second fork much nearer to the fourth vein than to the first fork; fourth vein long, hardly curved, nearer to the second fork than to the tip of the rib-vein.

a-f. England. (In Canada Balsam). From Mr. Walker's collection.

### 72. APHIS ROSARUM.

Aphis Rosarum, Kalt. Mon. Pflan. i. 101, 76. Walk. Ann. Nat. Hist. Ser. 2, iii. 302, 64.

a-y. England. (In Canada Balsam). From Mr. Walker's collection.

#### 73. APHIS AVELLANÆ.

Aphis Avellanæ, Schrank, Faun. Boic. ii. 112, 1207. Kalt. Mon. Pflan. i. 143, 116. Walk. Ann. Nat. Hist. Ser. 2, iii. 304, 65.

Aphis Coryli, Sir Oswald Mosley, Gard. Chron. i. (1841), 628.

Distance between the first and second veins at the tips thrice that between them at the base; third farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork very much nearer to the second fork than to the third vein, as near to the third as the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein curved near the base, straight towards the tip, nearer to the second fork than to the tip of the rib-vein.

a-v. England. (In Canada Balsam). From Mr. Walker's collection.

## 74. Aphis Urticaria.

Aphis Urticaria, Kalt. Mon. Pflan. i. 57, 39. Walk. Ann. Nat. Hist. Ser. 2, iv. 41, 66.

Aphis Urticæ, Fonscol. Ann. Soc. Ent. Fr. x. 180, 21.

Distance between the first and second veins at the base much less than half that between them at the tips; third much farther

from the second at the tip than it is at the base, a little farther from the second at the base than the second is from the first; first fork nearer to the second fork at the tip than it is to the third vein, and much nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein slightly curved, farther from the tip of the rib-vein than from the second fork.

a—u. England. (In Canada Balsam). From Mr. Walker's collection.

## 75. Aphis tetrarhoda.

Aphis tetrarhoda, Walk. Ann. Nat. Hist. Ser. 2, iv. 42, 67.

Distance between the first and second veins at the base more than half that between them at the tips; third vein very much farther from the second at the tip than at the base, much nearer to the second at the base than the second is to the first; first fork a little nearer to the third vein than to the second fork, much nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein much curved near the base, straight towards the tip, a little farther from the tip of the rib-vein than from the first fork.

a-l. England. (In Canada Balsam). From Mr. Walker's collection.

## 76. Aphis Cerasi.

Aphis Cerasi, Fabr. Syst. Ent. 734, 4. Sp. Ins. ii. 384, 5. Mant. Ins. 315, 6. Ent. Syst. iv. 211, 6. Syst. Rhyn. 295, 6. Gmel. Ed. Syst. Nat. i. 2203, 39. Schrank. Faun. Boic. ii. 1. Müll. Zool. Dan. Prod. 110, 1256. Rossi, Faun. Etrusc. 260, 1369. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 703. Fonscol. Ann. Soc. Ent. Fr. x. 179, 12. Luxford, Entomologist, 159, 40. Sir Oswald Mosley, Gard. Chron. i. 628. Kalt. Mon. Pflan. i. 45, 31. Ratz. Forst. Ins. iii. 216, 3. Walk. Ann. Nat. Hist. Ser. 2, iv. 43, 68. Fitch, The Senate, No. 30, 65. Cerasaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477.

Distance between the first and second veins at the base hardly more than one-third of that between them at the tips; third farther from the second at the tip than it is at the base, a little farther from

the second at the base than the second is from the first; first fork hardly nearer to the second fork at the tip than it is to the third vein, a little nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein slightly curved, straight towards the tip, farther from the tip of the rib-vein than from the second fork.

a. Scotland. Presented by E. Doubleday, Esq.
 b—r. England. (In Canada Balsam). From Mr. Walker's collection.

#### 77. APHIS TRIRHODA.

Aphis trirhoda, Walk. Ann. Nat. Hist. Ser. 2, iv. 45, 69.

Distance between the first and second veins at the tips more than twice that between them at the base; third nearer to the second at the base than at the tip, as near to the second at the base as the second is to the first; first fork generally nearer to the second fork than to the third vein, as near to the third as the third is to the second; second fork generally as near to the first fork as to the fourth vein; fourth vein farther from the rib-vein than from the second fork.

a-g. England. (In Canada Balsam). From Mr. Walker's coltion.

## 78. Aphis Brassicæ.

Aphis Brassicæ, Linn. Syst. Nat. ii. 734, 12. Faun. Suec. 2205, 985. Fabr. Sp. Ins. ii. 388, 35. Mant. Ins. ii. 316, 40. Ent. Syst. iv. 218, 41. Syst. Rhyn. 300, 41. Gmel. Ed. Syst. Nat. i. 2205, 12. Schrank, Faun. Boic. ii. 119, 1228. Müll. Fn. Frid. 30, 283. Frisch. Ins. xi. 10, pl. 3, f. 15, 81. Harr. Exposit. Engl. Ins. 66, pl. 17, f. 4—6. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 207. Swamm. Ins. v. 535. Kalt. Mon. Pflan. i. 106, 81. Harris, Ins. New Engl. 190. Curt. Journ. Roy. Agric. Soc. iii. 54, pl. C. f. 5, 6. Walk. Ann. Nat. Hist. Ser. 2, iv. 46, 70. Fitch, The Senate, No. 30, 65.

Aphis Rapharis, Schrank, Faun. Boic. ii. 1, 119, 1229. Aphis Isatidis, Fonscol. Ann. Soc. Ent. Fr. x. 165, 4.

Aphis Floris Rapæ, Curt. Journ. Roy. Agric. Soc. iii. 55, pl. C. f. 7, 8.

Cinara Raphani, Sir Oswald Mosley, Gard. Chron. i. 827. Cinara Brassicæ, Sir Oswald Mosley, Gard. Chron. i. 827. Crambaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Distance between the first and second veins at the base a little more than half that between them at the tips; third farther from the second at the tip than at the base, a little nearer to the second at the base than the second is to the first; first fork a little nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork very little nearer to the fourth vein than to the first fork; fourth vein slightly curved, very little nearer to the second fork than to the tip of the rib-vein.

a-h. England. (In Canada Balsam). Presented by F. Walker, Esq.

#### 79. APHIS CAPREÆ.

Aphis Capreæ, Fabr. Syst. Ent. 217, 33. Sp. Ins. ii. 384, 2. Mant. Ins. ii. 315, 3. Ent. Syst. iv. 211, 3. Syst. Rhyn. 294, 3. Gmel. Ed. Syst. Nat. i. 2203, 41. Schrank, Faun. Boic. ii. 104, 1179. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 703. Kalt. Mon. Pflan. i. 109, 84. Ratz. Forst. Ins. iii. 218, 12. Walk. Ann. Nat. Hist. Ser. 2, iv. 195, 71. Zool. vii. App. lv.

Aphis Pastinacæ, Linn. Syst. Nat. ii. 1, 734, 3. Faun. Suec. 977. Fabr. Mant. Ins. ii. 315, 13. Ent. Syst. iv. 213, 13. Syst. Rhyn. 296, 13. Gmel. Ed. Syst. Nat. i. 4, 2202, 3. Turt.

Syst. Nat. ii. 703.

Aphis Angelicæ? Réaum. Ins. iii. 322.

Aphis Archangelicæ, Scop. Ent. Carn. 137, 400. Gmel. Ed. Syst.

Nat. i. 4, 2210, 64.

Aphis Ægopodii, Ścop. Ent. Carn. 399. Fabr. Sp. Ins. ii. 387, 28. Mant. Ins. ii. 316, 33. Ent. Syst. iv. 217, 33. Syst. Rhyn. 299, 33. Gmel. Ed. Syst. Nat. i. 2204, 44. Stew. El. Nat. Hist. ii. 110.

Aphis Podagrariæ, Scop. Ent. Carn. 399. Schrank, Faun. Boic.

ii. 1, 110.

Cinara Capreæ? Sir Oswald Mosley, Gard. Chron. i. 748 Ægopodaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

Distance between the first and second veins at the tips about thrice that between them at the tips; third as far from the second at the tip as it is at the base, much farther from the second at the base than the second is from the first; first fork at the tip as near to the second fork as to the third vein, much nearer to the third vein than the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein curved near the base, almost straight towards the tip, much farther from the tip of the rib-vein than from the second fork.

Var. Second fork wanting towards the tip.

a. Scotland. Presented by E. Doubleday, Esq.
 b—k. England. (In Canada Balsam). From Mr. Walker's collection.

### 80. Aphis Persicæ.

Aphis Persicæ, Sulz. Hist. Ins. 105, pl. 11, f. 4, 5. Gmel. Ed. Syst.

Nat. ii. 2209, 60. Morren, Ann. Sci. Nat. 1836. Fonscol.

Ann. Soc. Ent. Fr. x. 14. Sir Oswald Mosley, Gard. Chron.
i. (1841), 684. Amyot et Serv. Hist. Nat. Hém. 601. Kalt.

Mon. Pflan. i. 93, 68. Walk. Ann. Nat. Hist. Ser. 2, v. 72.

Aphis Persicariæ? Hartig, Germ. Ent. Zeit. iii. 370, 12.

Distance between the first and second veins nearly thrice farther at the tips than at the base; third farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork a little farther from the second fork than from the third vein, very much nearer to the third vein than the third is to the second; second fork a little farther from the first fork than from the fourth vein; fourth vein curved, hardly nearer to the second fork than to the tip of the rib-vein.

a-t. England. (In Canada Balsam). From Mr. Walker's collection.

## 81. Aphis Rumicis.

Aphis Rumicis, Linn. Syst. Nat, ii. 734, 5. Faun. Suec. 979. Bonnet, Hist. Nat. i. 6. Fabr. Sp. Ins. ii. 385, 11. Mant. Ins. ii. 315, 12. Syst. Ent. 735, 10. Ent. Syst iv. 213, 12. Syst. Rhyn. 296, 12. Schrank, Faun. Boic. ii. 1, 111, 1204. Gmel. Ed. Syst. Nat. i. 2203, 5. Berk. Syn. i. 119. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 703. Kalt. Mon. Pflan. i. 81, 58. Walk. Ann. Nat. Hist. Ser. 2, v. 17, 73. Zool. vi. 2247, 2249; vii. App. xxxiv. xlix. li. lii.

Aphis Papaveris, Fabr. Gen. Ins. 303. Sp. Ins. ii. 388, 33. Mant. Ins. ii. 316, 38. Ent. Syst. iv. 218, 38. Syst. Rhyn. 299, 38. Gmel. Ed. Syst. Nat. i. 2202, 36. Schrank, Faun. Boic. ii. 1, 118, 1225. Rossi, Faun. Etrusc. 263, 1392. Turt. Syst. Nat. ii. 707. Léon-Duf. Réch. sur les Hémipt. iv. 242, pl. 9, f. 114, 115. Fonscol. Ann. Soc. Ent. Fr. x. 162, 2.

Aphis Fabæ, Scop. Ent. Carn. 139, 408. Gmel. Ed. Syst. Nat. i. 2210, 67. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 710. Kirby and Spence, Intr. Ent. i. 175. Bingley, Hist. Nat. iii. 189. Curt. Journ. Roy. Agric. Soc. vii. 418, pl. R. f.

21, 22; x. pt. 1, pl. U. f. 1—4.

Aphis Átriplicis, Linn. Faun. Suec. 1000. Fabr. Ent. Syst. iv. 217, 31. Syst. Rhyn. 298, 31. Gmel. Ed. Syst. Nat. i. 4, 2209, 32. Berk. Syn. i. 121. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 706.

Aphis Aparines, Fabr. Syst. Ent. 735, 8. Sp. Ins. 385, 9. Mant. Ins. ii. 315, 10. Ent. Syst. iv. 212, 10. Syst. Rhyn. 295, 10. Gmel. Ed. Syst. Nat. i. 2208, 59. Schrank, Faun. Boic. ii. 105, 1183. Kalt. Mon. Pflan. i. 46, 32.

Aphis armata, Hausm. Illig. Mag. i. 439, 30.

Aphis Craceæ, Linn. Syst. Nat. ii. 735, 13. Faun. Suec. 986. Deg. Ins. iii. 58, 8, pl. 2, f. 14—19. Scop. Ent. Carn. 407, 12. Gmel. Ed. Syst. Nat. i. 2205, 13. Schrank, Faun. Boic. iii. 119, 1231. Berk. Syn. 120. Stew. El. Nat. Hist. ii. 110. Kalt. Mon. Pflan. i. 86, 62.

Aphis hortensis, Fabr. Sp. Ins. ii. 387, 26. Mant. Ins. ii. 316, 31.

Gmel. Ed. Syst. Nat. i. 4, 2204, 42.

Aphis Chenopodii, Schrank, Faun. Boic. ii. 109, 1196. Kalt. Mon.

Pflan. i. 107, 82.

Aphis Viciæ, Fabr. Sp. Ins. ii. 390, 46. Mant. Ins. ii. 317, 51. Ent. Syst. iv. 220, 51. Syst. Rhyn. 301, 51. Turt. Syst. Nat. ii. 708. Aphis Thlapseos, Schrank, Faun. Boic. ii. 118, 1227.

Aphis Galii? Kalt. Mon. Pflan. i. 87, 63.

Aphis Genistæ, Scop. Ent. Čarn. 139, 409. Gmel. Ed. Syst. Nat. i. 2210, 68. Fonscol. Ann. Soc. Ent. Fr. x. 103, 3. Kalt. Mon. Pflan. 90, 66.

Aphis Laburni, Kalt. Mon. Pflan. 85, 61. Aphis Euphorbiæ? Kalt. Mon. Pflan. 94, 69.

Rumicifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Meconaphis Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Craccifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478. Genistifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Aphis Acetosæ, Linn. Syst. Nat. ii. 734, 6. Fabr. Sp. Ins. ii. 389, 43. Mant. Ins. ii. 317, 48. Ent. Syst. iv. 220, 49. Syst. Rhyn. 301, 49. Geoff. Ins. Par. ii. 496, 9. Réaum. Ins. iii. 286. Gmel. Ed. Syst. Nat. 1, 2203, 6. Turt. Syst. Nat. ii. 708.

Aphis Galii Scabri? Schrank, Faun. Boic. ii. 1, 105. Cinara Rumicis, Sir Oswald Mosley, Gard. Chron. i. 747. Aphis Dahliæ, Sir Oswald Mosley, Gard. Chron. i. 628.

Distance between the first and second veins at the base much less than half of that between them at the tips; third much farther from the second at the tip than it is at the base, as far from the second at the base as the second is from the first; first fork as near to the second fork as to the third vein, very much nearer to the third vein than the third is to the second; second fork as far from the fourth vein as from the first fork; fourth vein slightly curved, much nearer to the second fork than to the tip of the rib-vein.

Var. Second fork of third vein wanting.

Var. Deep black, shining: feelers black, a little shorter than the body: mouth pale yellow, with a black tip: nectaries black, as long as one-sixth of the body: legs pale yellow, moderately long; posterior thighs, fore-knees, feet and tips of shanks black: wings colourless, much longer than the body; alulæ and rib-veins pale yellow; brand yellow; veins brown. From Poa fluitans, beginning of July.

Var. Third vein farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; fourth vein a little nearer to the second fork than to the tip of the rib-vein.

a. Scotland. Presented by E. Doubleday, Esq.

b—h. England.

i-p. England. On the dock. (In Canada Balsam). From Mr. Walker's collection.

q-u. England. On the bean. (In Canada Balsam). From Mr. Walker's collection.

## 82. Aphis Symphiti.

Aphis Symphiti, Schrank, Faun. Boic. ii. 1, 107. Kalt. Mon. Pflan. i. 61, 43. Walk. Ann. Nat. Hist. Ser. 2, v. 25, 74.

Distance between the first and second veins at the base less than half of that between them at the tips; third a little farther from the second at the tip than it is at the base, as far from the second

at the base as the second is from the first; first fork not half the distance from the second fork that it is from the third vein, hardly nearer to the third vein than the third is to the second; second fork a little farther from the fourth vein than from the first fork; fourth vein curved, straight towards the tip, about half as far from the second fork as from the tip of the rib-vein.

Var. Second fork of third vein wanting.

a—z. England. (In Canada Balsam). From Mr. Walker's collection.

#### 83. Арніз Хумрнжж.

Aphis Nymphææ, Linn. Syst. Nat. ii. 714, 10. Faun. Suec. 983. Fabr. Mant. Ins. ii. 315, 17. Ent. Syst. iv. 214, 18. Syst. Rhyn. 297, 18. Schrank, Faun. Boic. ii. 1, 117. Gmel. Ed. Syst. Nat. i. 2204, 10. Müller, Ins. 1264. Turt. Syst. Nat. ii. 703. Fonscol. Ann. Soc. Ent. Fr. x. 166, 5. Kalt. Mon. Pflan. i. 104, 79. Walk. Ann. Nat. Hist. Ser. 2, v. 26, 75.

Aphis Butomi, Schrank, Faun. Boic. ii. 114, 1212. Nymphæifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Distance between the first and second veins at the base not one-third of that between them at the tips; third much farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork much nearer to the second fork than to the third vein, much nearer to the third vein than the third is to the second; second fork as far from the fourth vein as from the first fork; fourth vein slightly curved, nearer to the second fork than to the tip of the rib-vein.

Var. Second fork nearer to the first fork than to the fourth vein.

a-h. England. (In Canada Balsam). From Mr. Walker's collection.

## 84. APHIS SAMBUCI.

Aphis Sambuci, Linn. Syst. Nat. ii. 734, 4. Faun. Suec. 978. Bonnet, Hist. Nat. i. Frisch. Ins. ii. 14, pl. 18. Lister, Ins. 397, 40. Geoff. Ins. Par. i. 495, 3. Réaum. Ins. iii. 281,

350, pl. 8, f. 5—15. Fabr. Sp. Ins. ii. 384, 3. Mant. Ins. ii. 315, 4. Ent. Syst. iv. 211, 4. Syst. Rhyn. 294, 4. Gmel. Ed. Syst. Nat. i. 2202, 4. Berk. Syn. i. 110. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 703. Schrank, Faun. Boic. ii. 1, 111, 1202. Enc. Méth. Hist. Nat. Ins. pl. 115, f. 9. Kalt. Mon. Pflan. i. 83, 60. Walk. Ann. Nat. Hist. Ser. 2, v. 27, 76.

Cinara Sambuci, Sir Oswald Mosley, Gard. Chron. i. 827. Sambucifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477, 524.

Distance between the first and second joints at the tips more than twice that between them at the base; third much farther from the second at the tip than it is at the base, much farther from the second at the base than the second is from the first; first fork very much nearer to the second fork than to the third vein, not nearer to the third vein than the third is to the second; second fork as far from the fourth vein as from the first fork; fourth vein curved, very much nearer to the second fork than to the tip of the rib-vein.

Var. Second fork wanting towards the tip.

a—d. England. (In Canada Balsam). Presented by F. Walker, Esq.

## 85. Aphis Mali.

Aphis Mali, Fabr. Syst. Ent. 737, 19. Sp. Ins. ii. 387, 24. Mant. Ins. ii. 316, 29. Ent. Syst. iv. 217, 29. Syst. Rhyn. 298, 29. Gmel. Ed. Syst. Nat. i. 4, 2208, 58. Schrank, Faun. Boic. ii. 1, 116. Gotze, Ent. Beit. ii. 317. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 70, 6. Shaw, Gen. Zool. vi. pl. 58. Ramdohr, Abhandlung Verd. Werk. z. Ins. 1811. Schmidberger, 284. St. Farg. et Serv. Enc. Méth. x. 246. Spence, Trans. Ent. Soc. iii. 98. Rusticus, Ent. Mag. i. 143, iii. 337. Kalt. Mon. Pflan. i. 72, 52. Ratz. Forst. Ins. iii. 217, 7. Walk. Ann. Nat. Hist. Ser. 2, v. 269, 77. Zool. vi. 2251. Fitch, The Senate, No. 30, 65.

Aphis Pomi, Réaum. Îns. iii. 281—350, pl. 21, f. 5. Deg. Ins. iii. 53, 6, pl. 3, f. 18—26. Latr. Gen. Crust. iii. 173. Sir Os-

wald Mosley, Gard. Chron. i. 684.

Aphis Pyri, Réaum. Ins. iii. 281, 350, pl. 24, f. 1—4. Fonscol. Ann. Soc. Ent. Fr. x. 189, 32. Hartig, Germ. Ent. Zeit. iii. 369, 11.

Aphis Oxyacanthæ, Schrank, Faun. Boic. ii. 116, 1219. Oxyacanthaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478, 525. Distance between the first and second veins at the base less than half that between them at the tips; third much farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork very much nearer to the second fork at the tip than to the third vein, as near to the third vein as the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein curved near the base, almost straight towards the tip, very much nearer to the second fork than to the tip of the rib-vein.

Var. First fork a little nearer to the third vein than the third is to the second.

Var. Distance between the first and second veins at the base less than one-third of that between them at the tips; third a little farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork at the tip four times farther from the third vein than from the second fork; second fork more than twice farther from the fourth vein than from the first fork.

a-u. England. (In Canada Balsam). From Mr. Walker's collection.

## 86. Aphis Padi.

Aphis Padi, Linn. Syst. Nat. ii. 734, 8. Faun. Suec. 981. Réaum. Ins. iii. pl. 23, f. 9, 10. Fabr. Sp. Ins. ii. 389, 45. Mant. Ins. ii. 317, 50. Ent. Syst. iv. 220, 50. Syst. Rhyn. 301, 50. Gmel. Ed. Syst. Nat. i. 2203, 8. Schrank, Faun. Boic. ii. 115, 1216. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 708. Kalt. Mon. Pftan. i. 74, 53. Ratz. Forst. Ins. iii. 217, 8. Walk. Ann. Nat. Hist. Ser. 2, v. 274, 78.

Padifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477, 523.

Distance between the first and second veins at the tips full thrice that between them at the base; third very much farther from the second at the tip than at the base, very much farther from the second at the base than the second is from the first; first fork much nearer to the second fork than to the third vein, much nearer to the third vein than the third is to the second; second fork as near to the fourth vein at to the first fork; fourth vein long, curved near the base, straight towards the tip, full twice farther from the tip of the rib-vein than from the second fork.

a. Scotland. Presented by E. Doubleday, Esq.
 b—zzz. England. (In Canada Balsam). From Mr. Walker's collection.

#### 87. Aphis Sorbi.

Aphis Sorbi, Kalt. Mon. Pflan. i. 70, 51. Ratz. Forst. Ins. iii. 217, 6. Walk. Ann. Nat. Hist. Ser. 2, v. 276, 79.

Distance between the first and second veins at the base about half that between them at the tips; third much farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork generally as near to the fourth vein as to the first fork; fourth vein slightly curved, a little nearer to the second fork than to the tip of the rib-vein.

a—o. England. (In Canada Balsam). From Mr. Walker's collection.

## 88. APHIS EUONYMI.

Aphis Euouymi, Fabr. Syst. Ent. 736, 14. Sp. Ins. ii. 386, 17.

Mant. Ins. ii. 316, 21. Ent. Syst. iv. 214, 21. Syst. Rhyn.
297, 21. Gmel. Ed. Syst. Nat. i. 2206, 51. Schrank, Faun.
Boic. ii. 108. Turt. Syst. Nat. ii. 705. Sir Oswald Mosley,
Gard. Chron. i. 684. Kalt. Mon. Pflan. i. 79, 57. Walk. Ann.
Nat. Hist. Ser. 2, v. 278, 80.

Euonymaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Distance between the first and second veins at the base a little more than one-third of that between them at the tips; third very much farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork very much nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork as far from the fourth vein as from the first fork; fourth vein slightly curved, much nearer to the second fork than to the tip of the rib-vein.

Var. Third vein of one wing with an additional branch between the two forks.

a-l. England. (In Canada Balsam). From Mr. Walker's collection.

#### 89. APHIS LYCHNIDIS.

Aphis Lychnidis, Linn. Syst. Nat. ii. 734, 7. Faun. Suec. 980.

Bonnet, Hist. Nat. i. 6. Réaum. Ins. iii. 281, 340. Fabr.

Syst. Ent. 737, 1. Sp. Ins. ii. 384, 1. Mant. Ins. ii. 315, 2.

Ent. Syst. iv. 210, 2. Syst. Rhyn. 294, 2. Gmel. Ed. Syst.

Nat. i. 2203, 7. Schrank, Faun. Boic. ii. 114, 1214. Berk.

Syn. i. 119. Stew. El. Nat. Hist. ii. 110. Turt. Hist. Nat.

ii. 703. Kalt. Mon. Pflan. i. 92, 67. Walk. Ann. Nat. Hist.

Ser. 2, v. 280, 81.

Aphis Cucubali, Linn. Faun. Suec. 719.

Distance between the first and second veins at the base full half that between them at the tips; third a little farther from the second at the tip than at the base, as far from the second at the base as the second is from the first: first fork nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork a little nearer to the first fork than to the fourth vein; fourth vein curved, as near to the tip of the rib-vein as to the second fork.

a-d. Scotland. Presented by E. Doubleday, Esq.
 e-z. England. (In Canada Balsam). From Mr. Walker's collection.

## 90. Aphis Pruni.

Aphis Pruni, Fabr. Sp. Ins. ii. 385, 12. Mant. Ins. ii. 315, 14. Ent. Syst. iv. 213, 14. Syst. Rhyn. 296, 14. Deg. Ins. iii. 49, 5, pl. 2, f. 1—8. Schrank, Faun. Boic. ii. 115, 1217. Geoff. Ins. Par. i. 497, 10. Réaum. Ins. iii. 296, pl. 23, f. 9, 10. Götze, Ent. Beitr. ii. 312. Gmel. Ed. Syst. Nat. i. 2202, 37. Scop. Ent. Carn. 138, 406. Rossi, Faun. Etrusc. 260, 1374. Stew. El. Nat. Hist. ii. 110. Turt. Hist. Nat. ii. 704. Enc. Méth. Hist. Nat. Ins. pl. 116, f. 7, 8. Latr. Gen. Crust. iii. 173. St. Farg. et Serv. Enc. Méth. x. 245. Schmidb. Kollar, Treatise on Injurious Insects, transl. 284. Sir Oswald Mosley, Gard. Chron. i. 684. Kalt. Mon. Pflan. i. 52, 37. Ratz. Forst. Ins. iii. 216, 4. Walk. Ann. Nat. Hist. Ser. 2, v. 388, 82.

Aphis Arundinis, Fabr. Sp. Ins. 385, 7. Mant. Ins. ii. 315, 8. Ent. Syst. iv. 212, 8. Syst. Rhyn. 295, 8. Gmel. Ed. Syst.

Nat. i. 2202, 35. Kalt. Mon. Pflan. i. 54, 38.

Prunifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 476, 322. Calamaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477.

Distance between the first and second veins at the tips much more than twice that between them at the base; third much farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork much nearer to the second fork than to the third vein, as near to the third vein as the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein slightly curved, much nearer to the second fork than to the tip of the rib-vein.

Var.? The viviparous wingless female. Pale or dark green, elliptical, rather long and narrow: feelers a little more than half the length of the body: mouth pale green or pale yellow: nectaries black: legs pale green or pale yellow, moderately long; knees, feet, and tips of shanks darker.

The viviparous winged female. Pale green while a pupa: head, disk of chest and that of breast dark gray, when the wings are unfolded: feelers black, nearly as long as the body: nectaries hardly projecting above the surface of the abdomen: wing-ribs yellow; brand and veins brown. From Arundo Phragmitis at the end of September, near Newcastle.

Var.? The oviparous wingless female. Narrow, rather flat, slightly increasing in breadth from the head till near the tip of the abdomen, pale yellowish green, velvet-like; a vivid bluish-green stripe down the back and a more indistinct stripe on each side: feelers black, pale yellow towards the base, less than half the length of the body: mouth pale yellow with a black tip: nectaries pale yellow with black tips, about one-eighth of the length of the body: legs pale yellow, rather short; knees, feet, and tips of shanks black. Eggs green, spindle-shaped, very large.

The wingless male. Linear, narrower than the female: feelers nearly as long as the body: head sometimes buff, and chest sometimes yellow. From Arundo arenaria in the beginning of October, near Fleetwood.

a. Scotland. Presented by E. Doubleday, Esq.
 b-z. England. (In Canada Balsam). From Mr. Walker's collection.

#### 91. Aphis Lythri.

Aphis Lythri, Schrank, Faun. Boic. ii. 115, 1215. Kalt. Mon. Pflan. i. 51, 36. Walk. Ann. Nat. Hist. Ser. 2, v. 389, 83. Lythraphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477.

Distance between the first and second veins at the base a little less than half that between them at the tips; third farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork nearer to the second fork at the tip than to the third vein, a little nearer to the third vein than the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein much curved near the base, almost straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

Var. Second fork a little nearer to the first fork than to the fourth vein.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

## 92. Aphis Tussilaginis.

Aphis Tussilaginis, Walk. Ann. Nat. Hist. Ser. 2, v. 390, 84. a. England. Presented by F. Walker, Esq.

## 93. Aphis Dianthi.

Aphis Dianthi, Schrank, Faun. Boic. ii. 114, 1213. Kalt. Mon. Pflan. i. 42, 29. Walk. Ann. Nat. Hist. Ser. 2, v. 391, 85. Zool. vi. 2218, 2246; vii. App. xlvi., li., lv., lvi., lvii.; viii. App. ciii., civ.

Aphis vulgaris, Kyber, Germ. Mag. i.

Aphis Rapæ, Curt. Journ. Roy. Agric. Soc. iii. 53, pl. C. f. 1-3.

Aphis dubia, Curt. Journ. Roy. Agric. Soc. iii. 54, pl. C. f. 4.

Aphis vastator, Smee, The Potatoe Plant, &c., 81.

Aphis Solani? Kalt. Mon. Pflan. i. 15, 5.

Dianthaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477.

Distance between the first and second veins at the tips about thrice that between them at the base; third very much farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork as near to the second fork as to the third vein, nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein generally a little nearer to the second fork than to the tip of the rib-vein.

Var.? Black, very small: abdomen yellow: feelers a little longer than the body: mouth pale yellow with a black tip: nectaries short: legs pale yellow, moderately long; feet and tips of thighs and of shanks black: wings colourless, much longer than the body; wing-ribs and rib-veins pale yellow; brands and branch-veins pale brown. In the beginning of October on Thalictrum.

a—u. England. (In Canada Balsam). From Mr. Walker's collection.

#### 94. APHIS VIBURNI.

Aphis Viburni, Fabr. Syst. Ent. 737, 18. Sp. Ins. ii. 386, 23.

Mant. Ins. ii. 316, 28. Ent. Syst. iv. 216, 28. Syst. Rhyn.
298, 28. Scop. Ent. Carn. 396. Gmel. Ed. Syst. Nat. i. 2208,
57, Sulz. Ins. pl. 11, f. 1, 2. Stew. El. Nat. Hist. ii. 111.

Enc. Méth. Ins. pl. 115, f. 9, Schrank, Faun. Boic. ii. 111,
1203. Sulzer, Hist. Ins. pl. 11, f. 1, 2. Kalt. Mon. Pflan.
i. 78, 56. Sir Oswald Mosley, Gard. Chron. i. 684. Rusticus,
Ent. Mag. i. 218. Walk. Ann. Nat. Hist. Ser. 2, vi. 41, 86.
Viburnifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Distance between the first and second veins at the tips more than twice that between them at the base; third a little nearer to the second at the base than at the tip, farther from the second at the base than the second is from the first fork, nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork a little nearer to the fourth vein than to the second fork; fourth vein curved, farther from the tip of the rib-vein than from the second fork.

a—z. England. (In Canada Balsam). From Mr. Walker's collection.

#### 95. Aphis Xylostei.

Aphis Xylostei, Schrank, Faun. Boic. ii. 1, 107. Bonnet, Hist. Nat. i. 7. Réaum. Ins. iii. 286. Deg. Ins. iii. 96, 16, pl. 7, f. 8—13. Gmel. Ed. Syst. Nat. i. 2210, 74. Walk. Ann. Nat. Hist. Ser. 2, vi. 43, 87.

Aphis Loniceræ, Fonscol. Ann. Soc. Ent. Fr. x. 167, 6. Siebold, Froriep's Notizen, xii. 85. Kalt. Mon. Pflan. i. 48, 35. Sir

Oswald Mosley, Gard. Chron. i. 628.

Xylosthaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

The viviparous wingless female. Head in front slightly convex, not notched: feelers a little more than half the length of the body: first and second joints not angular; fourth much shorter than the third; fifth much shorter than the fourth; sixth shorter than the fifth; seventh much more than twice the length of the sixth: tip of the abdomen a little longer than the nectaries, which are as long as one-eighth or one-tenth of the body.

The viviparous winged female. Feelers a little shorter than the body: distance between the first and second wing-veins at the tips much more than twice that between them at the base; third a little farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork as near to the second fork at the tip as to the third vein, as near to the third vein as the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein very slightly curved, a little nearer to the second fork than to the tip of the rib-vein.

Var. First fork nearer to the third vein than the third vein is to the second.

a-r. England. (In Canada Balsam). From Mr. Walker's collection.

# 96. APHIS CERASINA.

Aphis Cerasina, Walk. Ann. Nat. Hist. Ser. 2, vi. 43, 88. England.

#### 97. APHIS CARDUINA.

Aphis Carduina, Walk. Ann. Nat. Hist. Ser. 2, vi. 44, 89.
a-p. England. (In Canada Balsam). From Mr. Walker's collection.

#### 98. Aphis Jacobææ.

Aphis Jacobææ, Schrank, Faun. Boic. ii. 123, 1242. Kalt. Mon. Pflan. i. 68, 49. Walk. Ann. Nat. Hist. Ser. 2, vi. 44, 90. Zool. viii. App. civ.

Distance between the first and second veins at the tips very much more than that between them at the base; third farther from the second at the tip than it is at the base, hardly farther from the second at the base than the second is from the first; first fork at the tip as far from the second fork as from the third vein, nearer to the third vein than the third is to the second; second fork as far from the fourth vein as from the first fork; fourth vein curved near the base, almost straight towards the tip, a little farther from the tip of the rib-vein than from the second fork.

England.

# 99. Aphis Helichrysi.

Aphis Helichrysi, Kalt. Mon. Pflan. i. 102, 77. Walk. Ann. Nat. Hist. Ser. 2, vi. 45, 91.

Aphis Balsamitæ? Müll. Zool. Dan. Prod. 109, 1252. Gmel. Ed. Syst. Nat. i. 4, 2210, 71.

Balsamitifex? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

Distance between the first and second veins at the base about half of that at the tips; third a little farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork at the tip a little nearer to the second fork than to the third vein, a little nearer to the third vein than the third vein is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein curved, nearer to the second fork than to the tip of the rib-vein.

Var. Second fork as near to the fourth vein as to the first fork; fourth vein as near to the tip of the rib-vein as to the second fork.

Var. The viviparous wingless female. Green, elliptical: feelers pale yellow, rather less than half the length of the body; tips brown: mouth pale yellow, with a brown tip: nectaries pale yellow, as long as one-twelfth of the body; tips brown: legs pale yellow, moderately long; feet and tips of shanks brown.

The viviparous winged female. Small and black: abdomen very dark green, much broader than the chest; its disk black: feelers black, rather shorter than the body: mouth black: nectaries black, as long as one-sixth of the body: legs black, moderately long; fore-thighs dull yellow at the base: wings colourless, very much longer than the body; wing-ribs pale yellow; brand pale brown; veins brown. From Achillea Millefolium, in the beginning of June.

a-n. England. (In Canada Balsam). From Mr. Walker's collection.

#### 100. APHIS TANACETINA.

Aphis Tanacetina, Walk. Ann. Nat. Hist. Ser. 2, iv. 46, 92.

Distance between the first and second veins almost twice farther at the tips than at the base; third hardly farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork nearer to the second fork than to the third vein, as near to the third vein as the third is to the second; second fork a little nearer to the first than to the fourth vein; fourth vein slightly curved, a little farther from the tip of the rib-vein than from the second fork.

a-h. England. (In Canada Balsam). From Mr. Walker's collection.

# 101. Aphis Cratægaria.

Aphis Cratægaria, Walk. Ann. Nat. Hist. Ser. 2, vi. 46, 93

Distance between the first and second veins at the base about half that between them at the tips; third nearer to the second at the base than at the tip, a little nearer to the second at the base than the second is to the first; first fork nearer to the third vein than to the second fork, much nearer to the third vein than the third is to the second; second fork farther from the first fork than from the

fourth vein; fourth vein curved near the base, straight towards the tip, a little nearer to the second fork than to the tip of the rib-vein.

a-o. England. (In Canada Balsam). From Mr. Walker's collection.

#### 102. APHIS CRATEGI.

Aphis Cratægi, Kalt. Mon. Pflan. i. 66, 47. Ratz. Forst. Ins. iii. 217, 5. Walk. Ann. Nat. Hist. Ser. 2, vi. 47, 94. Aphis Pyri? Fonscol. Ann. Soc. Ent. Fr. x. 189, 32.

Distance between the first and second veins more than twice farther at the tips than at the base; third a little farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork much nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork hardly farther from the fourth vein than from the first fork; fourth vein much curved near the base, almost straight towards the tip, a little nearer to the second fork than to the tip of the rib-vein.

England.

# 103. APHIS HEDERÆ.

Aphis Hederæ, Kalt. Mon. Pflan. i. 89, 65. Walk. Ann. Nat. Hist. Ser. vi. 47. Aphis Ilicis, Kalt. Mon. Pflan. i. 88, 64.

Distance between the first and second veins more than twice farther at the tips than at the base; third vein a little farther from the second at the tip than at the base, as far from the second at the base as the second is from the first; first fork much nearer to the second fork than to the third vein, as near to the third vein as the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein slightly curved, much nearer to the second fork than to the tip of the rib-vein.

The viviparous wingless female. Oval, dull buff or dark red, covered with a white bloom: feelers setaceous, pale yellow, rather more than half the length of the body; tips brown: mouth pale yellow, with a brown tip: nectaries dark brown, as long as one-tenth of the body: legs pale yellow, moderately long; feet and tips of the shanks brown. In some instances the feelers are nearly as long as the body, and the tips of the thighs are brown.

3 s 2

The viviparous winged female. Elliptical and dark brown while a pupa: feelers as long as the body: nectaries as long as one-sixth of the body: rudimentary wings pale green. Black, or very dark green, when the wings are unfolded: abdomen dark red: feelers shorter than the body: mouth tawny, with a black tip: nectaries black, as long as one-fifth or one-sixth of the body: legs tawny; posterior thighs, excepting the base, feet and tips of shanks black; legs sometimes black; shanks and fore-thighs, excepting their tips, of a yellow hue: wings colourless, much longer than the body; wing-ribs pale yellow; brand pale brown; veins brown. In the middle of June the wingless insect and the pupa vary much in colour; sometimes they are dull pale yellowish green, sometimes bright red, or dark reddish gray; sometimes the feelers are white, with a black tip to each joint, or black towards the tips, and more than half the length of the body: mouth white, with a black tip: legs white; feet and tips of thighs and of shanks black: oviduct black and short.

a—o. England. (In Canada Balsam). From Mr. Walker's collection.

## 104. Aphis Berberidis.

Aphis Berberidis, Kalt. Mon. Pflan. i. 95, 70. Walk. Ann. Nat. Hist. Ser. 2, vi. 118, 96.

Distance between the first and second veins about twice farther at the tips than it is at the base; third a little farther from the second at the tip than it is at the base, as far from the second at the base as the second is from the first; first fork at the tip very much nearer to the second fork than to the third vein, as near to the third vein as the third is to the second; second fork much nearer to the first fork than to the fourth vein; fourth vein much curved, straight near the tip, generally a little nearer to the second fork than to the tip of the rib-vein.

a-v. England. (In Canada Balsam). From Mr. Walker's collection.

# 105. APHIS NASTURTII.

Aphis Nasturtii, Kalt. Mon. Pflan. i. 76, 54. Walk. Ann. Nat. Hist. Ser. 2, vi. 119, 97.

Distance between the first and second veins at the tips much more than twice that between them at the base; third much farther

from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork nearer to the first fork than to the fourth vein; fourth vein curved, generally nearer to the second fork than to the tip of the rib-vein.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

### 106. APHIS HUMULI.

Aphis Humuli, Schrank, Faun. Boic. ii. 110, 1199. Kalt. Mon. Pflan. i. 36, 24. Walk. Ann. Nat. Hist. Ser. 2, vi. 120, 98. Letters of Rusticus, 71. Plomley, Nat. Hist. Hop-fly. Aphis Pruni Mahaleb, Fonscol. Ann. Soc. Ent. Fr. x. 175, 15. Humulifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 477.

Distance between the first and second veins at the tips much more than twice that between them at the base; third a little farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork a little nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork much nearer to the fourth vein than to the first fork; fourth vein much curved near the base, almost straight towards the tip, very much nearer to the second fork than to the tip of the rib-vein.

Var. Pupa. Pale yellow, or red mottled with yellow, and slightly tinged with black: feelers black, yellow towards the base: tip of mouth black: nectaries pale yellow, with black tips, as long as one-fourth of the body: legs very pale yellow; tips of shanks brown; feet black. Middle of October.

Var. Third vein wanting towards the tip.

Var. Part of the first fork wanting; the stump forming an unusually acute angle with the second fork.

Var. First fork wanting towards the tip.

Var. Third vein wanting towards the tip; the stump forming an unusually acute angle, with the first fork.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

#### 107. APHIS PRUNINA.

Aphis Prunina, Walk. Ann. Nat. Hist. Ser. 2, vi. 120, 99. Zool. vi. 2250.

Aphis ----? Walk. Zool. vi. 2250.

Distance between the first and second veins at the tips full twice that between them at the base; third a little nearer to the second at the base than at the tip, a little nearer to the second at the base than the second is to the first; first fork generally a little nearer to the second fork than to the third vein, most often a little nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved, a little nearer to the second fork than to the tip of the rib-vein.

a-p. England. (In Canada Balsam). From Mr. Walker's collection.

#### 108. Aphis Prunaria.

Aphis Prunaria, Walk. Ann. Nat. Hist. Ser. 2, vi. 121, 100. Zool. vi. 2250.

Aphis spinarum? Hartig, Germ. Ent. Zeit. iii. 370, 13.

Distance between the first and second veins at the tips about thrice that between them at the base; third very much farther from the second at the tip than at the base, as near to the second at the base as the second is to the first; first fork generally nearer to the second fork than to the third vein, much nearer to the third vein than the third is to the second; second fork about as far from the fourth vein as from the first fork; fourth vein long, slightly curved, almost straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

a—e. England. (In Canada Balsam). From Mr. Walker's collection.

# 109. APHIS POTENTILLE.

Aphis Potentillæ, Walk. Ann. Nat. Hist. Ser. 2, iv. 122, 101. England.

#### 110. APHIS LIGUSTRI.

Aphis Ligustri, Sir Oswald Mosley, Gard. Chron. i. 628. Kalt. Mon. Pflan. i. 48, 34.

Var. Lower branch of the first fork of the third vein wanting.

Var. Distance between the first and second veins at the base less than half that between them at the tips; second wanting in one wing, third a little nearer to the second at the tip than at the base, as near to the second at the base as the second is to the first; first fork partly wanting in both wings; fourth vein curved near the base, straight towards the tip, as near to the tip of the rib-vein as to the second fork.

a-g. England. (In Canada Balsam). From Mr. Walker's collection.

#### 111. Aphis Ononidis.

Aphis Ononidis, Kalt. Ent. Zeit. Stett. vii. 173.

This species is distinguished by its spotted wings, and by its large fore-chest, which is rather broader than the middle-chest.

The viviparous winged female. Small, pale yellow, active, rather short and broad: length of the fore-chest rather more than half its breadth: some pale olive-green irregular stripes along the head and chest, three or four rows of dark gray spots on the abdomen; spots on the middle rows larger and more irregular than those on the side rows: feelers pale yellow, black towards their tips, a little longer than the body: mouth pale yellow, with a black tip, hardly reaching the middle hips: legs dull yellow; tips of the feet darker: wings a little longer than the body, with a brown spot on the tip of each vein; brand brown, including a colourless spot; distance between the first and second veins at the tips nearly twice that between them at the base; third very much nearer to the second at the base than at the tip, much nearer to the second at the base than the second is to the first; first fork nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork nearer to the first fork than to the fourth vein; fourth vein much curved, nearer to the tip of the rib-vein than to the second fork: rib-vein of the lower wing clouded with brown, with only one branch-vein, which has a brown spot on its tip.

a. England. Presented by F. Walker, Esq.

#### 112. APHIS TANACETARIA?

Aphis Tanacetaria? Kalt. Mon. Pflan. i. 19, 8.

The viviparous wingless female. Dark red, oval: front convex: feelers much longer than the body; second joint with an angle on the inside of its tip; fourth much shorter than the third; fifth a little shorter than the fourth; sixth about one fourth of the length of the fifth, not more than one-sixth of the length of the seventh: nectaries about one-fourth of the length of the body: legs long, very stout. From Tanacetum vulgare in August. England.

113. Aphis Viciæ.

Aphis Viciæ, Kalt. Mon. Pflan. i. 20, 9. Prussia.

114. APHIS RIBICOLA.

Aphis Ribicola, Kalt. Mon. Pflan. i. 33, 22.

Distance between the first and second veins at the tips almost twice that between them at the base; third vein very little farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork as far from the second fork as from the third vein, nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein much curved near the base, straight towards the tip, very much farther from the tip of the ribvein than from the second fork.

a, b. Prussia. Presented by F. Walker, Esq.

115. Aphis Convolvuli.

Aphis Convolvuli, Kalt. Mon. Pflan. i. 40, 27. Prussia.

116. Aphis Chelidonii.

Aphis Chelidonii, Kalt. Mon. Pflan. i. 41, 28.

Distance between the first and second veins very much farther at the tips than at the base; third vein as near to the second at the tips as at the base, much farther from the second at the base than the second is from the first; first fork twice farther from the third vein than from the second fork, as far from the third vein as the third is from the second; second fork a little nearer to the first fork than to the fourth vein; fourth vein curved near the base, straight towards the tip, nearer to the second fork than to the tip of the ribvein.

a, b. Prussia. Presented by F. Walker, Esq.

### 117. APHIS CAPSELLÆ.

Aphis Capsellæ, Kalt. Mon. Pflan. i. 58, 40. Prussia.

### 118. APHIS PLANTAGINIS.

Aphis Plantaginis, Schrank, Faun. Boic. ii. 106, 1185. Bonnet, Hist. Nat. i. 56. Gmel. Ed. Syst. Nat. i. 2209, 63. Stew. El. Nat. Hist. ii. 111. Kalt. Mon. Pflan. i. 59, 41.

Aphis Dauci, Fabr. Syst. Ent. 737, 23. Sp. Ins. ii. 387, 29. Mant. Ins. ii. 316, 34. Ent. Syst. iv. 217, 34. Syst. Rhyn. 299, 34. Gmel. Ed. Syst. Nat. i. 2204, 45. Schrank, Faun. Boic. ii. 1, 110, 1200. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 706.

Plantaginifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Europe.

# 119. APHIS SCABIOSÆ.

Aphis Scabiosæ, Scop. Ent. Carn. 138, 10, 405. Gmel. Ed. Syst.

Nat. i. 2210, 66. Schrank, Faun. Boic. ii. 105, 1082. Stew.

El. Nat. Hist. ii. 111. Fonscol. Ann. Soc. Ent. Fr. x. 179,

19. Kalt. Mon. Pflan. i. 60, 42.

Psorodaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 478.

Europe.

# 120. APHIS SEDI.

Aphis Sedi, Kalt. Mon. Pflan. i. 63, 44.

Distance between the first and second veins at the base full half that between them at the tips; third vein a little nearer to the

second at the base than at the tip, as near to the second at the base as the second is to the first; first fork much nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork as near to the first fork as to the fourth vein; fourth vein curved along the whole length, nearer to the second fork than to the tip of the rib-vein.

a-s. England. (In Canada Balsam). From Mr. Walker's collection.

## 121. Aphis Rhamni.

Aphis Rhamni, Fonscol. Ann. Soc. Ent. Fr. x. 177, 17. Europe.

## 122. APHIS FRANGULÆ.

Aphis Rhamni, Kalt. Mon. Pflan. i. 64, 45. Aphis Frangulæ, Kalt. Verh. d. n. Ver. ii. 11. Europe.

# 123. APHIS EPILOBII.

Aphis Epilobii, Kalt. Mon. Pflan. i. 64, 46.

Distance between the first and second veins at the tips full thrice that between them at the base; third a little farther from the second at the tip than at the base, almost twice farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, as far from the third vein as the third is from the second; second fork farther from the first fork than from the fourth vein; fourth vein rather long, curved near the base, almost straight towards the tip, nearer to the second fork than to the tip of the rib-vein.

a-s. England. (In Canada Balsam). From Mr. Walker's collection.

# 124. Aphis Grossulariæ.

Aphis Grossulariæ, Kalt. Mon. Pflan. i. 67, 48. Europe.

### 125. Aphis Ranunculi.

Aphis Ranunculi, Kalt. Mon. Pflan. i. 69, 50.

Distance between the first and second veins thrice farther at the tips than at the base; third vein much nearer to the second at the base than at the tip, farther from the second at the base than the second is from the first; first fork very much nearer to the second fork than to the third vein, as far from the third vein as the third is from the second; second fork as far from the first as from the fourth vein; fourth vein curved, a little nearer to the second fork than to the tip of the rib-vein.

Var. Second fork a little nearer to the first than to the fourth vein.

Var. Second vein forked near the tip. a—d. Prussia. Presented by F. Walker, Esq.

126. APHIS NEPETÆ.

Aphis Nepetæ, Kalt. Mon. Pflan. i. 77, 55.

Distance between the first and second veins at the tips more than thrice farther than that at the base; third vein a little nearer to the second at the base than at the tip, much farther from the second at the base than the second is from the first; first fork very much nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein curved near the base, straight towards the tip, twice farther from the tip of the rib-vein than from the second fork.

a-i. Prussia. Presented by F. Walker, Esq.

# 127. Aphis Euphorbiæ.

Aphis Euphorbiæ, Kalt. Mon. Pflan. i. 94, 69. Aphis Euphorbiæ? Walk. Zool. vii. App. xliii. England, Prussia.

128. Aphis Myricæ.

Aphis Myricæ, Kalt. Mon. Pflan. i. 96, 71.

The viviparous wingless female. Yellow or orange, flat, very hairy, adorned with four rows of large more or less transverse greenish brown spots, slightly increasing in breadth from the head to the tip of the abdomen, which is very slightly convex and not at all lengthened; between the inner pair and the outer pair of the rows of spots are some dots of the same colour: two little teeth on the front: feelers much less than half the length of the body: nectaries dingy yellow with brown tips, very near the tip of the abdomen, one-eighth or one-tenth of the length of the body: legs short.

The viviparous winged female. Like the wingless female, but not hairy: feelers pale yellow, brown towards the tips, much shorter than the body; fourth joint little more than half the length of the third; fifth a little shorter than the fourth; sixth much shorter than the fifth; seventh extremely short: legs pale yellow; feet and tips of the shanks brown: wings colourless, short, hardly extending beyond the abdomen; brand pale yellow, brown at the base and at the tip; veins blackish.

Distance between the first and second veins at the tips almost thrice that between them at the base; third vein almost twice farther from the second at the tip than at the base, nearer to the second at the base than the second is to the first; first fork almost twice farther from the third vein than from the second fork, very much farther from the third vein than the third is from the second; second fork nearer to the first fork than to the fourth vein; fourth vein slightly curved, a little nearer to the tip of the rib-vein than to the second fork.

a-c. England. Presented by F. Walker, Esq.

# 129. Aphis Vitellinæ.

Aphis Vitellinæ, Schrank, Faun. Boic. ii. 103, 1178. Kalt. Mon. Pflan. i. 97, 72. Ratz. Forst. Ins. iii. 217, 9. Vitellinifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479. Prussia.

130. Aphis Erysimi.

Aphis Erysimi, Kalt. Mon. Pflan. i. 99, 75. Europe.

#### 131. APHIS SALICETI.

Aphis Saliceti, Kalt. Mon. Pflan. i. 103, 78. Ratz. Forst. Ins. iii. 217, 11.

Aphis Salicis, Fonscol. Ann. Soc. Ent. x. 176, 16. Salicitifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

Distance between the first and second veins at the tips much more than twice that between them at the base; third much farther from the second at the tip than it is at the base, much farther from the second at the base than the second is from the first; first fork full twice farther from the third vein than from the first fork, a little nearer to the third vein than the third is to the second; second fork much nearer to the first fork than to the fourth vein; fourth curved near the base, almost straight towards the tip, a little nearer to the second fork than to the tip of the rib-vein.

a-r. England. (In Canada Balsam). From Mr. Walker's collection.

### 132. APHIS PIMPINELLE.

Aphis Pimpinellæ, Kalt. Mon. Pflan. i. 105, 80. Prussia.

# 133. Aphis Amerinæ.

Aphis Amerinæ, Hartig, Germ. Ent. Zeitt. iii. 369. Germany.

# 134. Aphis Anthrisci.

Aphis Anthrisci, Kalt. Mon. Pflan. i. 112, 86. Prussia.

# 135. Aphis Cardui.

Aphis Cardui, Linn. Syst. Nat. ii. 735, 17. Faun. Suec. 988. Fabr. Sp. Ins. ii. 385, 13. Mant. Ins. ii. 315, 15. Ent. Syst. iv. 214, 16. Syst. Rhyn. 296, 16. Gmel. Ed. Syst. Nat. i. 2205, 17. Rossi, Faun. Etrusc. 261, 1375. Berk. Syn. i. 120. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 703. Fonscol. Ann. Soc. Ent. Fr. x. Kalt. Mon. Pflan. 115, 89.

Aphis Onopordi, Schrank, Faun. Boic. ii. 121, 1236. Scolymaphis? Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

Europe.

#### 136. Aphis Nerii.

Aphis Nerii, Fonscol. Ann. Soc. Ent. Fr. x. 179, 20. Kalt. Mon. Pflan. i. 118, 91.

Europe.

### 137. APHIS BETULARIA.

Aphis Betularia, Kalt. Mon. Pflan. i. 119, 93. Ratz. Forst. Ins. iii. 218, 14.

Aphis tuberculata, Heyden, Mus. Senkenb. ii. 296.

Oncodaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 479.

Germany.

### 138. APHIS SALICTI.

Aphis Salicti, Schrank, Faun. Boic. ii. 103, 1177. Kalt. Mon. Pflan. i. 121, 93. Ratz. Forst. Ins. iii. 218, 17. Germany.

# 139. Aphis Camelliæ.

Aphis Camelliæ, Kalt. Mon. Pflan. i. 122, 94.

Distance between the first and second veins at the tips more than twice farther than at the base; third vein much farther from the second at the tip than at the base, as near to the second at the base as the second is to the first; first fork nearer to the third vein than the third vein is to the second; second fork extremely short or wanting; fourth vein slightly curved, almost straight towards the tip, nearer to the second fork than to the tip of the rib-vein; brand long, very dark brown.

a-c. Prussia. Presented by F. Walker, Esq.

# 140. APHIS PRUNICOLA.

Aphis Prunicola, Kalt. Mon. Pflan. i. 122, 95. Aphis Cerasi, Schrank, Faun. Boic. ii. 115, 1218. Germany.

### 141. Aphis Tragopogonis.

Aphis Tragopogonis, Kalt. Mon. Pflan. i. 124, 96.

The viviparous wingless female. Black, shining, convex, increasing in breadth from the head to near the tip of the abdomen; segments very distinct: feelers much shorter than the body; first and second joints short and stout, with no notch on the inner side; fourth joint shorter than the third, longer than the fifth; sixth rather broad, shorter than the fifth; seventh very slender, as long as the third, which is mostly tawny: sides of the fore-chest white beneath: nectaries about one-twelfth of the length of the body: shanks yellow; thighs yellow towards the base.

The viviparous winged female. Dull dark red while a pupa, with dull pale green rudiments of wings: feelers nearly as long as the body when the wings are unfolded, rather thick, excepting the seventh joint: wings colourless; rib-veins yellow towards the base; brands grayish; veins black.

Distance between the first and second veins twice farther at the tips than at the base; third vein a little nearer to the second at the base than at the tip, much nearer to the second at the base than the second is to the first; first fork as far from the second fork as from the third vein, farther from the third vein than the third is from the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein curved near the base, almost straight towards the tip, a little nearer to the second fork than to the tip of the ribvein.

a-f. Prussia. Presented by F. Walker, Esq.

# 142. Aphis Ligustici.

Aphis Ligustici, Fabr. Sp. Ins. ii. 389, 44. Mant. Ins. ii. 317, 49. Ent. Syst. iv. 219, 46. Syst. Rhyn. 301, 46. Gmel. Ed. Syst. Nat. i. 4, 2203, 40. Stew. El. Nat. Hist. ii. 110. Kalt. Mon. Pflan. i. 140, 107.

Norway.

## 143. APHIS VITIS.

Aphis Vitis, Scopoli, Ent. Carn. 398. Fabr. Sp. Ins. ii. 390, 49.

Mant. Ins. ii. 317, 54. Ent. Syst. iv. 220, 54. Syst. Rhyn.
302, 54. Gmel. Ed. Syst. Nat. i. 2207, 56. Turt. Syst. Nat.
ii. 708. Kalt. Mon. Pflan. 141, 109.

South of Europe.

## 144. APHIS CNICI.

Aphis Cnici, Schrank, Faun. Boic. ii. 122, 1239. Kalt. Mon. Pflan. i. 142, 112.

Germany.

## 145. Aphis Sanguisorbæ.

Aphis Sanguisorbæ, Schrank, Faun. Boic. ii. 106, 1187. Kalt. Mon. Pflan. i. 143, 114.

Germany.

# 146. Aphis Verbasci.

Aphis Verbasci, Schrank, Faun. Boic. ii. 107, 1192. Fonscol. Ann. Soc. Ent. Fr. x. 181, 24. Kalt. Mon. Pflan. i. 143, 115. Europe.

# 147. APHIS NAPELLI.

Aphis Napelli, Schrank, Faun. Boic. 118, 1226. Kalt. Mon. Pflan. i. 143, 117.

Germany.

# 148. Aphis Truncata.

Aphis truncata, Hausmann, Illig. Mag. i. 443. Kult. Mon. Pflan. i. 145, 119.

Germany.

## 149. APHIS LEUCANTHEMI.

Aphis Leucanthemi, Scopoli, Ent. Carn. 138, 404. Gmel. Ed. Syst. Nat. i. 4, 2210, 65. Stew. El. Nat. Hist. ii. 111.

a-d. England. (In Canada Balsam). Presented by F. Walker, Esq.

### 150. Aphis Cichorii.

Aphis Cichorii, Dutrochet, Ann. Sci. Nat. xxx. 204, 1833. France.

### 151. APHIS DISCOLOR.

Aphis discolor, Burm. Handb. Ent. ii. 94, 1. Germany.

## 152. APHIS ZEÆ.

Aphis Zew, Bonafous, Ann. Soc. Ent. Fr. iv. 1835, 658, pl. 20, B. f. 1, 2.

France.

# 153. Aphis Mayeri.

Aphis Mayeri, Gmel. Ed. Syst. Nat. i. 2211, 75. Aphis, &c., Mayer, Abb. Boehm. Ges. iv. 1833. Bohemia.

# 154. Aphis ----?

Aphis Salias, Harris, Ins. Mass. 190. United States.

# 155. Aphis -----?

Aphis Populea, Bouché, Ent. Zeit. Stett. iv. 82. Germany.

# 156. APHIS NERVOSA.

Aphis nervosa, Zett. Ins. Lapp. i. 2, 311, 8. Lapland.

157. APHIS TENUINERVIS.

Aphis tenuinervis, Zett. Ins. Lapp. i. 2, 310, 9. Lapland.

158. APHIS FUSCIPENNIS.

Aphis fuscipennis, Zett. Ins. Lapp. i. 2, 311, 11. Lapland.

159. APHIS CYNOGLOSSI.

Aphis Cynoglossi, Walk. Zool. vi. 2217.

Distance between the first and second veins at the tips about twice that between them at the base; third much nearer to the second at the base than at the tip, as near to the second at the base as the second is to the first; first fork at the tip much nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein curved near the base, straight towards the tip, nearer to the second fork than to the tip of the rib-vein.

a. England. Presented by F. Walker, Esq.

160. Aphis socia.

Aphis socia, Walk. Zool. vi. 2217.

Distance between the first and second veins at the tips about thrice that between them at the base; third a little farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork at the base very much nearer to the second fork than to the third vein, as near to the third vein as the third is to the second; second fork nearer to the first fork than to the tip of the fourth vein; fourth vein much curved, a little nearer to the second fork than to the tip of the rib-vein.

a. England. Presented by F. Walker, Esq.

161. APHIS PARTICEPS.

Aphis particeps, Walk. Zool. vi. 2217. a—d. England. Presented by F. Walker, Esq.

162. APHIS SODALIS.

Aphis sodalis, Walk. Zool. vi. 2218. a-d. England. Presented by F. Walker, Esq.

163. Aphis consors.

Aphis consors, Walk. Zool. vi. 2218.

Distance between the first and second veins at the tips more than thrice that between them at the base; third very much farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork a little nearer to the second fork than to the third vein; hardly nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein much curved, nearer to the second fork than to the tip of the rib-vein.

a, b. England. Presented by F. Walker, Esq.

164. APHIS PULVERA.

Aphis pulvera, Walk. Zool. vi. 2218. a—d. England. Presented by F. Walker, Esq.

165. APHIS AMICA.

Aphis amica, Walk. Zool. vi. 2218. a—d. England. Presented by F. Walker, Esq.

166. Aphis collega.

Aphis collega, Walk. Zool. vi. 2218. a, b. England. Presented by F. Walker, Esq.

#### 167. APHIS COMMODA.

Aphis commoda, Walk. Zool. vi. 2219.

Distance between the first and second veins full thrice farther at the tips than at the base; third a little nearer to the second at the base than at the tip, much nearer to the second at the base than the second is to the first; first fork a little nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork a little farther from the fourth vein than from the first fork; fourth vein curved, straight towards the tip, nearer to the second fork than to the tip of the rib-vein.

Var. First fork a little farther from the second fork than from the third vein; second fork a little nearer to the fourth vein than to the first fork.

a. England. Presented by F. Walker, Esq.

## 168. Aphis frequens.

Aphis frequens, Walk. Zool. vi. 2219. a—t. England. Presented by F. Walker, Esq.

# 169. Aphis Lycopsidis.

Aphis Lycopsidis, Walk. Zool. vi. 2219. a—d. England. Presented by F. Walker, Esq.

# 170. Aphis consueta.

Aphis consueta, Walk. Zool. vi. 2219. a, b. England. Presented by F. Walker, Esq.

# 171. APHIS ADJUTA.

Aphis adjuta, Walk. Zool. vi. 2220. a. England. Presented by F. Walker, Esq.

#### 172. APHIS CONJUNCTA.

Aphis conjuncta, Walk. Zool. vi. 2220. a, b. England. Presented by F. Walker, Esq

#### 173. APHIS BASALIS.

Aphis basalis, Walk. Zool. vi. 2220.

a. England. Presented by F. Walker, Esq.

#### 174. Aphis familiaris.

Aphis familiaris, Walk. Zool. vi. 2220.a. England. Presented by F. Walker, Esq.

## 175. APHIS ADJUVANS.

Aphis adjuvans, Walk. Zool. vi. 2220. a-d. England. Presented by F. Walker, Esq.

#### 176. APHIS ADSCITA.

Aphis adscita, Walk. Zool. vi. 2220.

Distance between the first and second veins thrice farther at the tips than at the base; third a little farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork a little nearer to the first fork than to the fourth vein; fourth vein much curved, a little nearer to the second fork than to the tip of the rib-vein.

Var. Second fork a little nearer to the fourth vein than to the first fork.

Var. Second fork very short. a—c. England. Presented by F. Walker, Esq. 177. APHIS SUFFRAGANS.

Aphis suffragans, Walk. Zool. vi. 2221.

Distance between the first and second veins full twice farther at the tips than at the base; third vein farther from the second at the tip than at the base, a little farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork more or less nearer to the first fork than to the fourth vein; fourth vein much curved near the base, straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

a, b. England. Presented by F. Walker, Esq.

178. APHIS PERSOLA.

Aphis persola, Walk. Zool. vi. 2246.

a. England. Presented by F. Walker, Esq.

179. Aphis nigro-rufa.

Aphis nigro-rufa, Walk. Zool. vi. 2247.

a. England. Presented by F. Walker, Esq.

180. Aphis sejuncta.

Aphis sejuncta, Walk. Zool. vi. 2247.

a. England. Presented by F. Walker, Esq.

181. APHIS ASPERULÆ.

Aphis Asperulæ, Walk. Zool. vi. 2248.

Distance between the first and second veins about twice farther at the tips than at the base; third farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork nearer to the second than to the third vein, nearer to the third vein than the third is to the second;

second fork as far from the first fork as from the fourth vein; fourth vein slightly curved, almost straight towards the tip, a little farther from the tip of the rib-vein than from the second fork.

Var. Distance between the first and second veins much more than twice farther at the tips than at the base; third almost twice farther from the second than the second is from the first.

a, b. England. Presented by F. Walker, Esq.

182. April Glechomæ.

Aphis Glechomæ, Walk. Zool. vi. 2247. England.

183. APHIS LIMONII.

Aphis Sonchi, Var.? Walk. Zool. vi. 2248. a. England. Presented by F. Walker, Esq.

184. APHIS VERONICE.

Aphis Veronicæ, Walk. Zool. vi. 2248.

Distance between the first and second veins at the tips nearly thrice farther than at the base; third a little farther from the second at the tip than at the base, nearly twice farther from the second at the base than the second is from the first; first fork at the tip as far from the second fork as from the third vein, nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than the first fork; fourth vein slightly curved near the base, straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

a-f. England. (In Canada Balsam). Presented by F. Walker, Esq.

185. Aphis Polygoni.

Aphis Polygoni, Walk. Zool. vi. 2249. a—j. England. Presented by J. Hardy, Esq. 186. APHIS SIMILIS.

Aphis similis, Walk. Zool. vi. 2249. England.

187. APHIS DEPOSITA.

I

Aphis - ? Walk. Zool. vi. 2250.

Distance between the first and second veins much more than twice farther at the tips than at the base; third farther from the second at the tip than at the base, as near to the second at the base as the second is to the first; first fork much nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork nearer to the first fork than to the fourth vein; fourth vein much curved, straight near the tip, about as far from the tip of the rib-vein as from the second fork.

a, b. England. Presented by F. Walker, Esq.

188. APHIS DIVERSA.

Aphis diversa, Walk. Zool. vi. 2251. England.

189. Aphis dispar.

Aphis dispar, Walk. Zool. vi. 2251. England.

190. APHIS LATERALIS.

Aphis lateralis, Walk. Zool. vi. 2251. England.

191. APHIS EXTRANEA.

Aphis extranea, Walk. Zool. vii. App. xxxi. England.

192. APHIS CONTERMINA.

Aphis contermina, Walk. Zool. vii. App. xxxi. England.

193. APHIS REDUNDANS.

Aphis redundans, Walk. Zool. vii. App. xxxii. England.

194. APHIS CERTA.

Aphis certa, Walk. Zool. vii. App. xxxii. England.

195. APHIS INSESSA.

Aphis insessa, Walk. Zool. vii. App. xxxii. England.

196. APHIS CADIVA.

Aphis cadiva, Walk. Zool. vii. App. xxxii. England,

197. APHIS AUCTA.

Aphis aucta, Walk. Zool. vii. App. xxxiii. England.

198. Aphis addita.

Aphis addita, Walk. Zool. vii. App. xxxiii. England.

199. Aphis adducta.

Aphis adducta, Walk. Zool. vii. App. xxxiv. England.

200. APHIS DISSITA.

Aphis dissita, Walk. Zool. vii. App. xxxiv.

Distance between the first and second veins about thrice farther at the tips than at the base; third vein a little farther from the second at the tip than at the base, much farther at the base from the second than the second is from the first; first fork nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork much nearer to the fourth vein than to the first fork; fourth vein much curved near the base, almost straight towards the tip, twice farther from the tip of the rib-vein than from the second fork.

Var. Third vein with a fork near its tip.

Var. Third vein not farther from the second at the tip than at the base, twice farther at the base from the second than the second is from the first.

a, b. England. Presented by F. Walker, Esq.

201. APHIS TRIBULIS.

Aphis tribulis, Walk. Zool. vii. App. xxxiv. England.

202. APHIS TRANSLATA.

Aphis translata, Walk. Zool. vii. App. xxxv. England.

203. APHIS INDUCTA.

Aphis inducta, Walk. Zool. vii. App. xxxv. England.

204. APHIS INCUMBENS.

Aphis incumbens, Walk. Zool. vii. App. xxxv. a. England. Presented by F. Walker, Esq.

205. APHIS IMPACTA.

Aphis impacta, Walk. Zool. vii. App. xxxv., xlvii. England.

206. APHIS CONVIVA.

Aphis conviva, Walk. Zool. vii. App. xxxvi. England.

207. APHIS NOCIVA.

Aphis nociva, Walk. Zool. vii. App. xxxvi.

Distance between the first and second veins full twice farther at the tips than at the base; third as near to the second at the tip as at the base, farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, hardly nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved near the base, almost straight towards the tip, a little farther from the tip of the rib-vein than from the second fork.

a, b. England. Presented by F. Walker, Esq.

208. Aphis consona.

Aphis consona, Walk. Zool. vii. App. xxxvi. England.

209. APHIS BELLULA.

Aphis bellula, Walk. Zool. vii. App. xxxvi. England.

210. APHIS TRANSMUTATA.

Aphis transmutata, Walk. Zool. vii. App. xxxvii.

Distance between the first and second veins more than twice farther at the tips than at the base; third vein farther from the second at the tip than at the base, as near to the second at the base as the second is to the first; first fork generally nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein curved, straight near the tip, a little nearer to the second fork than to the tip of the rib-vein.

a-e. England. Presented by F. Walker, Esq.

211. APHIS CONVECTA.

Aphis convecta, Walk. Zool. vii. App. xxxvii. England.

212. APHIS PERSORBENS.

Aphis persorbens, Walk. Zool. vii. App. xxxvii. England.

213. APHIS INTERNATA.

Aphis internata, Walk. Zool. vii. App. xxxvii. England.

214. APHIS TRANSPOSITA.

Aphis transposita, Walk. Zool. vi. App. xxxvii. England.

215. APHIS DETRACTA.

Aphis detracta, Walk. Zool. vii. App. xxxviii. England.

216. APHIS EGRESSA.

Aphis egressa, Walk. Zool. vii. App. xxxviii. England.

217. APHIS DEVECTA.

Aphis devecta, Walk. Zool. vii. App. xxxviii. England.

218. APHIS INSERTA.

Aphis inserta, Walk. Zool. vii. App. xxxix. England.

219. APHIS NUTRICATA.

Aphis nutricata, Walk. Zool. vii. App. xxxix. England.

220. APHIS MACTATA.

Aphis mactata, Walk. Zool. vii. App. xxxix. England.

221. APHIS INSITA.

Aphis insita, Walk. Zool. vii. App. xxxix. England.

222. APHIS ASSIDUA.

Aphis assidua, Walk. Zool. vii. App. xl. England.

223. APHIS INCULTA.

Aphis inculta, Walk. Zool. vii. App. xliii. England.

224. APHIS ROBUSTA.

Aphis robusta, Walk. Zool. vii. App. xliii. England.

225. APHIS ALTERNA.

Aphis alterna, Walk. Zool. vii. App. xliii. England.

226. APHIS SECUNDA.

Aphis secunda, Walk. Zool. vii. App. xliv. England.

227. APHIS TRANSIENS.

Aphis transiens, Walk. Zool. vii. App. xliv. England.

228. APHIS ILLATA.

Aphis illata, Walk. Zool. vii. App. xliii. England.

229. APHIS RELATA.

Aphis relata, Walk. Zool. vii. App. xliv. England.

230. APHIS TERTIA.

Aphis tertia, Walk. Zool. vii. App. xlv. England.

231. APHIS INDECISA.

Aphis indecisa, Walk. Zool. vii. App. xlv. England.

232. Aphis incerta.

Aphis incerta, Walk. Zool. vii. App. xlv. England.

233. APHIS INULE.

Aphis Inulæ, Walk. Zool. vii. App. xlv.

The viviparous winged female. Wings colourless; veins pale; brands dusky towards the tips; distance between the first and second veins at the tips about twice that at the base; third a little nearer to the second at the base than at the tip, a little farther from the second at the base than the second is from the first; first fork as near to the third vein as to the second fork, much nearer to the

third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein much curved, very little nearer to the tip of the rib-vein than to the second fork.

Var. First fork much nearer to the third vein than to the second fork; second fork nearer to the fourth vein than to the first fork.

England.

234. APHIS CONSPERSA.

Aphis conspersa, Walk. Zool. vii. App. xlvi. England.

235. Aphis confusa.

Aphis confusa, Walk. Zool. vii. App. xlvi. England.

236. Aphis indistincta.

Aphis indistincta, Walk. Zool. vii. App. xlvi. England.

237. Aphis adjecta.

Aphis adjecta, Walk. Zool. vii. App. xlvi. a. England. Presented by F. Walker, Esq.

238. APHIS VACILLANS.

Aphis vacillans, Walk. Zool. vii. App. xlvii. England.

239. APHIS RUFULA.

Aphis rufula, Walk. Zool. vii. App. xlvii. a—c. England. Presented by F. Walker, Esq.

#### 240. APHIS PICTA.

Aphis picta, Walk. Zool. vii. App. xlvii. a—d. England. Presented by J. Hardy, Esq.

#### 241. APHIS IMPACTA.

Aphis impacta, Walk. Zool. vii. App. xlviii.

Distance between the first and second veins at the base more than twice that between them at the tips; third farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork a little nearer to the second than to the third vein, nearer to the third vein than the third is to the second; second fork generally as near to the fourth vein as to the first fork; fourth vein much curved near the base, almost straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

a-c. England. Presented by J. Hardy, Esq.

### 242. APHIS EXUL.

Aphis exul, Walk. Zool. vii. App. xlviii.

Distance between the first and second veins at the tips much more than twice farther than at the base; third much farther from the second at the tip than at the base, as near to the second at the base as the second is to the first; first fork much nearer to the second fork than to the third vein, very little nearer to the third vein than the third is to the second; second fork a littl nearer to the first fork than to the fourth vein; fourth vein more or less curved, much nearer to the second fork than to the tip of the rib-vein.

a—f. England. Presented by F. Walker, Esq.

# 243. APHIS ADVENA.

Aphis advena, Walk. Zool. vii. App. xlviii. England.

## 244. APHIS QUERENS.

Aphis quærens, Walk. Zool. vii. App. xlviii.

Distance between the first and second veins at the tips about twice that between them at the base; third a little farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork nearer to the third vein than to the second fork, much nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein much curved near the base, almost straight towards the tip, a little nearer to the second fork than to the tip of the rib-vein.

a. England. Presented by F. Walker, Esq.

245. APHIS ASSUETA.

Aphis assueta, Walk. Zool. vii. App. xlix. England.

246. APHIS BARTSLE.

Aphis Bartsiæ, Walk. Zool. vii. App. xlix. a-j. England. Presented by F. Walker, Esq.

247. APHIS TENUIOR.

Aphis tenuior, Walk. Zool. vii. App. xlix. England.

248. Aphis Gnaphalii.

Aphis Gnaphalii, Walk. Zool. vii. App. l. a. England. Presented by F. Walker, Esq.

249. Aphis atomaria.

Aphis atomaria, Walk. Zool. vii. App. 1. a. England. Presented by F. Walker, Esq.

#### 250. APHIS DERELICTA.

Aphis derelicta, Walk. Zool. vii. App. l.

Distance between the first and second veins more than twice farther at the tips than at the base; third vein a little nearer to the second at the base than at the tip, nearer to the second at the base than the second is to the first; first fork much nearer to the second fork than to the third vein, not nearer to the third vein than the third is to the second; second fork sometimes nearer to the fourth vein than to the first fork; fourth vein curved near the base, almost straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

a-e. England. Presented by F. Walker, Esq.

## 251. Aphis Euphrasiæ.

Aphis Euphrasiæ, Zool. vii. App. li. a. England. Presented by F. Walker, Esq.

252. Aphis tincta.

Aphis tineta, Walk. Zool. vii. App. li. England.

253. Aphis præterita.

Aphis præterita, Walk. Zool. vii. App. lii. England.

254. APHIS POLLINOSA.

Aphis pollinosa, Walk. Zool. vii. App. lii. England.

255. APHIS DESPECTA.

Aphis despecta, Walk. Zool. vii. App. liii. England.

#### 256. APHIS EPILOBIINA.

Aphis Epilobiina, Walk. Zool. vii. App. liii.

Distance between the first and second veins more than twice farther at the tips than at the base; third a little farther from the second at the tip than at the base, farther from the second at the base than the second is from the first; first fork nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork a little nearer to the first than to the fourth vein; fourth vein curved, a little nearer to the second fork than to the tip of the rib-vein.

Var.? Black: abdomen green, with a row of black dots on each side: feelers fully as long as the body: mouth pale yellow, with a black tip: nectaries pale green, about one-sixth of the length of the body: legs pale yellow, moderately long; feet, knees, and thighs from the middle to the tips black: wings colourless, much longer than the body; wing-ribs and rib-veins pale yellow; wing-brands pale brown; the other veins brown.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

## 257. APHIS CONSUMPTA.

Aphis consumpta, Walk. Zool. vii. App. liv. England.

258. Aphis pilosa.

Aphis pilosa, Walk. Zool. vii. App. liv. England.

259. APHIS FLAVEOLA.

Aphis flaveola, Walk. Zool. vii. App. lv. England.

#### 260. Aphis Chrysanthemi.

Aphis Chrysanthemi, Walk. Zool. vii. App. lvi.

Distance between the first and second veins about twice farther at the tips than at the base; third farther from the second at the tip than at the base, not farther from the second at the base than the second is from the first; first fork nearer to the second fork at the tip than to the third vein, hardly nearer to the third vein than the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein curved, almost straight towards the tip, much nearer to the second fork than to the tip of the rib-vein.

a, b. England. Presented by F. Walker, Esq.

261. APHIS INTRODUCTA.

Aphis introducta, Walk. Zool. vii. App. lvii. England.

262. APHIS APPOSITA.

Aphis apposita, Walk. Zool. viii. App. ciii. England.

263. APHIS LATA.

Aphis lata, Walk. Zool. viii. App. ciii. England.

264. Aphis diminuta.

Aphis diminuta, Walk. Zool. viii. App. ciii. England.

265. APHIS CERASICOLENS.

Aphis cerasicolens, Fitch, The Senate, No. 30, 65. New York.

266. APHIS ASCLEPIADIS.

Aphis Asclepiadis. Fitch, The Senate, No. 30, 65, New York.

267. Aphis Cornifolia.

Aphis cornifoliæ, Fitch, The Senate, No. 30, 65. New York.

268. APHIS CRATEGIFOLIE.

Aphis cratægifoliæ, Fitch, The Senate, No. 30, 66. New York.

269. APHIS BETULÆCOLENS.

Aphis betulæcolens, Fitch, The Senate, No. 30, 66. New York.

270. Aphis Sambucifoliæ.

Aphis sambucifoliæ, Fitch, The Senate, No. 30, 66. New York.

271. April Pinicolens.

Aphis pinicolens, Fitch, The Senate, No. 30, 66. New York.

272. Aphis Populifoliæ.

Aphis populifoliæ, Fitch, The Senate, No. 30, 66. New York.

273. APHIS RUDBECKIÆ.

Aphis Rudbeckiæ, Fitch, The Senate, No. 30, 66. New York.

PART IV.

## 274. Aprils ----?

Lachnus Abietis, Fitch, The Senate, No. 30, 67. New York.

## 275. Aphis Quercifoliæ.

Lachnus Quercifoliæ, Fitch, The Senate, No. 30, 67. New York.

## 276. APHIS SALICELLIS.

Aphis salicellis, Fitch, The Senate, No. 30, 67. New York.

## 277. Aphis Alnifoliæ.

Lachnus Alnifoliæ, Fitch, The Senate, No. 30, 67. New York.

# 278. Aphis farinosa.

Aphis farinosa, Deg. Ins. iii. 76, 11, pl. 3, f. 31, pl. 4, f. 10—13. Gmel. Ed. Syst. Nat. i. 4, 2210, 73. Sweden.

# 279. APHIS FUSCULA.

Aphis fuscula, Zett. Ins. Lapp. i. 2, 311, 10. Lapland.

## 280. APHIS PILOSA.

Apis pilosa, Zett. Ins. Lapp. i. 311, 3. Lapland.

281. APHIS RUFIPES.

Aphis rufipes, Hartig, Germ. Ent. Zeit. iii. 369, 1. Germany.

282. Aphis Cytisorum.

Aphis cytisorum, Hartig, Germ. Ent. Zeit. 370, 14. Germany.

283. APHIS CALLIPTERA.

Aphis callipterus, Hartig, Germ. Ent. Zeit. iii. 369. Germany.

284. APHIS PALLIPES.

Aphis pallipes, Hartig, Germ. Ent. Zeit. iii. 369, 6. Germany.

285. Aphis ——?

Aphis Vitellinæ, Hartig, Germ. Ent. Zeit. iii. 369, 3. Germany.

286. APHIS VIMINALIS.

Aphis viminalis, Hartig, Germ. Ent. Zeit. iii. 369, 2. Germany.

287. APHIS PILICORNIS.

Aphis pilicornis, Hartig, Jahrb. iii. 369. Germany.

288. APHIS TULIPÆ.

Aphis Tulipæ, Fonscol. Ann. Soc. Ent. Fr. x. 167, 7. France.

#### 289. APHIS TUBEROSÆ.

Aphis Tuberosæ, Fonscol. Ann. Soc. Ent. Fr. x. 180, 22. France.

#### 290. APHIS AURANTII.

Aphis Aurantii, Fonscol. Ann. Soc. Ent, Fr. x. 178, 18. France.

## 291. APHIS? LAPIDARIA.

Chermes lapidarius, Fabr. Syst. Rhyn. 306, 19. Lachnus lapidarius, Burm. Handb. Ent. ii. 1, 92, 1. Austria.

## 292. APHIS GLANDULOSA.

Aphis glandulosa, Kalt. Ent. Zeit. vii. 170. Prussia.

## 293. Aphis Cerastii.

Aphis Cerastii, Kalt. Ent. Zeit. Stett. vii. 171.

Distance between the first and second veins at the tips full twice that between them at the base; third vein as far from the second at the tip as at the base, as near to the second at the base as the second is to the first; first fork a little nearer to the third vein than to the second fork, as near to the third vein as the third is to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein short, slightly curved, much nearer to the tip of the rib-vein than to the second fork.

a-d. Prussia. Presented by F. Walker, Esq.

## 294. APHIS SETOSA.

Aphis setosa, Kalt. Ent. Zeit. Stett. vii. 172.

Abdomen beset with spines. This species is perhaps one of the group which is represented by A. Juglandis, &c.

a-d. Prussia. Presented by F. Walker, Esq.

#### 295. APHIS VALIDA.

Nigra, robusta, hirta; antennæ ferrugineæ, pilosæ, apice nigræ; scutellum ferrugineum; pedes ferruginei, pilosi, tibiis apice tarsisque nigris; alæ subcinereæ, venis fusco marginatis.

Black, stout, hairy: feelers ferruginous, hairy, rather thick, a little shorter than the body; fourth joint hardly half the length of the third; fifth, sixth, and seventh black; fifth as long as the fourth; sixth a little more than half the length of the fifth; seventh as long as the sixth, but much more slender: scutcheon ferruginous: nectaries spindle-shaped, about one-sixth of the length of the body: legs stout, ferruginous, hairy; feet and tips of the shanks black: wings slightly gray; veins stout, black, clouded with brown; ribvein brown, forming a very obtuse angle beneath the rib-vein, which is pale brown; distance between the first and second veins at the base about half that between them at the tips; third hardly nearer to the second at the tip than at the base, farther from the second at the base than the second is from the first; third vein and its forks slightly curved towards the fourth vein; first fork at the tip a little nearer to the second fork than to the third vein, a little farther from the third vein than the third is from the second; second fork very little nearer to the fourth vein than to the first fork; fourth vein curved near the base, straight towards the tip, nearer to the second fork than to the tip of the rib-vein. Length of the the body 2 lines; of the wings 4 lines.

England.

## 296. Aphis subterbanea.

Viridis vel rufa; antennis apice thoracis disco femoribus tibiisque apice tarsisque obscuris; alis limpidis.

A. Ranunculi, Var.?

Dull green or pale red, stout, convex, somewhat oval: front almost straight: feelers stout, hardly half the length of the body;

 $3 \times 3$ 

fourth joint about half the length of the third; fifth a little shorter than the fourth; sixth shorter than the fifth; seventh slender, almost as long as the fourth, fifth, and sixth: nectaries about one-twentieth of the length of the body: legs short.

The viviparous winged female. More slender than the wingless insect, almost elliptical: feelers more than half the length of the body: disk of the chest dark: nectaries about one-fifteenth of the length of the body: legs moderately long; feet and tips of the thighs and of the shanks brownish: wings colourless; distance between the first and second veins more than twice farther at the tips than at the base; third a little nearer to the second at the base than at the tip, a little nearer to the second at the base than the second is to the first; first fork a little nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth curved near the base, almost straight towards the tip, very much nearer to the second fork than to the tip of the rib-vein. In July, on the roots of the parsnip, occasionally at the depth of one foot beneath the surface, whereto it crawls when the wings are about to be developed. Length of the body 1 line; of the wings  $2\frac{3}{4}$  lines.

a—r. England. (In Canada Balsam). From Mr. Walker's collection.

## 297. Aphis terricola.

Aphis terricola, Rondani, Nuovi Annali delle Scienze Naturali di Bologna, Novembre, 1847.

Italy.

## 298. APHIS INSITA.

Viridi-rufa, ovata aut elliptica, convexa, disco nigra; pedes graciles, femoribus tibiisque apice tarsisque nigris; alis limpidis.

The viviparous wingless female. Oval, plump, shining, dull greenish red, with a black disk: front hardly convex: feelers much shorter than the body; fourth joint more than half the length of the third; fifth much shorter than the fourth; sixth shorter than the fifth; seventh a little longer than the fifth and the sixth: nectaries about one-eighth of the length of the body: legs of moderate length.

The viviparous winged female. Almost elliptical: feelers as long as the body: nectaries almost one-sixth of the length of the body: legs rather long; feet and tips of thighs and of shanks blackish: wings colourless; rib-veins and brands pale; distance between the first and second veins very much farther at the tips than at the base; third vein a little nearer to the second at the base than at the tip, as near to the second at the base as the second is to the first; first fork generally as near to the third vein as to the second fork, generally as near to the third vein as to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein more or less curved, generally nearer to the second fork than to the tip of the rib-vein. In May, on Cineraria. Length of the body  $\frac{2}{3}$  line; of the wings 2 lines.

a-e. England. (In Canada Balsam). Presented by F. Walker, Esq.

## 299. APHIS ABROTANI.

Pallida; thoracis discus niger; alæ limpidæ.

Pale; disk of the chest dark: feelers, nectaries, and legs of moderate length: wings colourless; distance between the first and second veins at the base half of that between them at the tips; third much nearer to the second at the base than at the tip, as near to the second at the base as the second is to the first; first fork hardly nearer to the second fork than to the third vein, very much nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein curved near the base, almost straight towards the tip, farther from the tip of the rib-vein than from the second fork.

England.

## 300. Aphis Abietaria

Nigra, obscura, convexa, subovata, albo pollinosa; antennæ corporis dimidio vix longiores; cornicula brevia; pedes sat breves.

The viviparous wingless female. Nearly oval, very convex, dull coal-black, with a slight white tinge, rather larger than A. Abietina: feelers rather more than half the length of the body: legs are rather short: nectaries about one-twelfth of the length of the body.

a. England. Presented by F. Walker, Esq.

#### 301. Aphis egens.

Pallida et aptera vel nigra et alata; hujus thoracis segmentorum margines flavo-virides; abdomen flavo-viride, lateribus nigro maculatum, corniculis brevissimis; antennæ corpore non longiores; pedes fæm. alatæ nigri, femoribus anticis tibiisque flavis.

The viviparous wingless female. Bright lemon-colour, inclining to white beneath, oval, convex, very small, rather short: feelers black, as long as the body, yellow at the base: mouth pale yellow, with a black tip, nearly reaching the hind hips: nectaries yellow, with black tips, hardly one-twelfth of the length of the body: legs pale yellow; knees, feet, and tips of shanks black.

Var. B. Yellowish white.

Var. y. Saffron-colour.

The viviparous winged female. Black: feelers shorter than the body: mouth dull yellow, with a black tip: fore border and hind border of fore-chest and fore-breast dull greenish yellow: abdomen dark yellowish green, with a row of black spots on each side: nectaries black, about one-twelfth of the length of the body: fore-thighs and shanks except their tips dull yellow: wing-ribs pale yellow; rib-veins yellow; brands pale brown; branch-veins brown.

England.

# 302. Aphis Hippophaes.

Flava, fusiformis; thoracis discus in alatis fuscus; antennæ corpore breviores; cornicula mediocria; alæ limpidæ.

The viviparous wingless female. Pale yellow, spindle-shaped, sometimes tinged with red: a few green dots on the back, and a row of transverse green spots along each side of the body: front bristly: feelers shorter than the body; first joint angular on the inner side of its tip; fourth joint much shorter than the third; fifth shorter than the fourth; sixth much shorter than the fifth; seventh a little longer than the sixth: nectaries from one-fifth to one-sixth of the length of the body.

The viviparous winged female. Disk of the chest brownish: wings colourless; distance between the first and second veins about twice farther at the tips than at the base; third very much farther

from the second at the tip than at the base, very much nearer to the second at the base than the second is to the first; first fork a little nearer to the second fork than to the third vein, nearer to the third vein than the third is to the second; second fork a little nearer to the first fork than to the fourth vein; fourth vein curved near the base, straight towards the tip, nearer to the tip of the rib-vein than to the second fork. Length of the body  $\frac{3}{4}$  line; of the wings 2 lines.

England.

## 303. APHIS MELISSE.

Pallida, minuta, elliptica; antennæ corpore multo longiores; cornicula longissima.

The viviparous wingless female. Elliptical, pale yellow, very small: front narrow, with a conical protuberance on each side: feelers very much longer than the body; fourth joint about half the length of the third; fifth as long as the fourth; sixth much shorter than the fifth; seventh as long as the third: nectaries about one-third of the length of the body: legs long. Length of the body  $\frac{1}{2}$  line.

England.

## 304. APHIS CISTI.

Flavescens, minuta, brevis, lata, fere elliptica; antennæ corpore breviores; cornicula brevia.

The viviparous wingless female. Yellowish, convex, small, short, brown, almost elliptical: front slightly convex: feelers much shorter than the body; joints from the third to the sixth successively decreasing in length; seventh more than twice the length of the sixth: nectaries about one-eighth of the length of the body: legs rather short.

The viviparous winged female. Feelers a little shorter than the body: wings colourless; distance between the first and second veins more than twice farther at the tip than at the base; third more than twice farther from the second at the tip than at the base; very little farther at the base from the second than the second is from the first; first fork nearer to the second than to the third vein; second fork often wanting; fourth vein slightly curved, farther from the tip of

the rib-vein than from the second fork. Length of the body  $\frac{1}{3}$  line; of the wings  $1\frac{1}{3}$  line.

Scotland.

## 305. APHIS POÆ.

Aphis Poæ, Hardy, North British Agriculturist, ii. 788. (Dec. 12th, 1850).

Scotland.

## 306. APHIS STELLARIÆ.

Aphis Stellariæ, Hardy, North British Agriculturist, ii. 788. Aphis Holci, Hardy, North British Agriculturist, ii. 531. Scotland.

## 307. APHIS ERICE.

Aphis Ericæ, Hardy, MSS.

Viridis, minuta, nitens, convexa, subgranulosa; vertex bifoveolata; antennæ corpore longiores; abdomen substylatum, corniculis ellipticis.

"Grass-green, small, shining, flask-shaped, convex above, very slightly granulose: two minute foveæ on the crown, and a very minute notch in front: legs testaceous: mouth with a black tip: feelers springing from slight tubercles, setaceous, dusky, longer than the body; first and second joints greenish; third long; fifth shorter than the fourth; sixth very short; seventh long and slender: sides margined, somewhat dusky: a style at the tip of the abdomen: nectaries elliptical: legs of moderate length, slightly pubescent, dusky greenish; shanks, excepting a band near each tip and tips of the thighs, darker; claws black. Length of the body about \(\frac{3}{4}\) line." Hardy, MSS.

Scotland.

## 308. Aphis humilis.

Flava, gracilis, fusiformis; frons trituberculata; antennæ corporis dimidio vix longiores; cornicula brevissima; pedes sat breves.

The viviparous wingless female. Pale yellow, long, slender, spindle-shaped, rather flat: three tubercles on the front: feelers

very slender, about half the length of the body; fourth joint about half the length of the third; fifth as long as the fourth; sixth a little shorter than the fifth; seventh more than twice the length of the sixth: abdomen with a short style at the tip: nectaries less than one-twelfth of the length of the body: legs rather short. Length of the body 1 line.

a. England. (In Canada Balsam). Presented by F. Walker, Esq.

## 309. APHIS BETULINA.

Fuscescens; antennæ corpore breviores; cornicula pallida, mediocria; pedes pallidi, tibiis apice tarsisque nigricantibus; alæ limpidæ.

The viviparous winged female. Small, brownish: feelers pale towards the base, rather stout, shorter than the body; fourth joint much shorter than the third; fifth as long as the fourth; sixth a little shorter than the fifth; seventh about twice the length of the sixth: nectaries pale, about one-sixth of the length of the body: legs pale; feet and tips of the shanks blackish: wings colourless; distance between the first and second veins more than twice farther at the tips than at the base; third very much nearer to the second at the base than at the tip, as near to the second at the base as the second is to the first; first fork a little nearer to the third vein than to the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein slightly curved, much farther from the tip of the rib-vein than from the second fork. Length of the body ½ line; of the wings  $1\frac{1}{2}$  line.

England.

## 310. Aphis superabilis.

Obscurè flavescens, convexa, sat lata, subelliptica; antennæ corpore plus minusve breviores; thoracis discus in alatis niger; pedes pallidi, femoribus tibiisque apice tarsisque fuscis; alæ limpidæ.

The viviparous wingless female. Dingy yellow, convex, rather broad, almost elliptical: front slightly convex: feelers about half the length of the body; fourth joint much shorter than the third;

fifth shorter than the fourth; sixth shorter than the fourth; seventh about twice the length of the sixth: nectaries a little more than one-twentieth of the length of the body: legs of moderate length.

The viviparous winged female. Feelers almost as long as the body; seventh joint about thrice the length of the sixth: disk of the chest black: legs pale; feet and tips of the thighs and of the shanks brownish: wings colourless; distance between the first and second veins almost twice farther at the tips than at the base; third much nearer to the second at the base than at the tip, as near to the second as the second is to the first; first fork nearer to the third vein than to the second fork, much nearer to the third vein than the third is to the second; second fork generally a little nearer to the fourth vein than to the first fork; fourth vein much curved, a little farther from the tip of the rib-vein than from the second fork.

a-c. England. (In Canada Balsam). From Mr. Walker's collection.

#### 311. Aphis gracilis.

Nigricans, gracilis, subtus pollinosa; antennæ corpore vix breviores; abdomen viride, corniculis brevissimis; pedes pallidi, femoribus tibiisque apice tarsisque nigris; alæ albæ.

Blackish, slender, covered beneath with white powder: feelers slender, nearly as long as the body; fourth joint very much shorter than the third; fifth shorter than the fourth; sixth subclavate, much shorter than the fifth; seventh longer than the fifth: abdomen green; nectaries very short: legs pale, long, slender; feet and tips of the thighs and of the shanks black: wings white; brands pale, rather long; veins black towards the tips; distance between the first and second veins at the tips about thrice that between them at the base; third much farther from the second at the tip than it is at the base, a little farther from the second at the base than the second is from the first; first fork at the tip nearer to the third vein than to the second fork, much nearer to the third vein than the third is to the second; second fork nearer to the fourth vein than to the first fork; fourth vein curved, especially near the base, nearer to the second fork than to the tip of the rib-vein. From the willow, in October. Length of the body  $1\frac{1}{2}$  line; of the wings  $3\frac{1}{2}$  lines.

Var. First fork wanting towards the tip.

a. England. Presented by F. Walker, Esq.

## 312. APHIS VERATRI.

Nigra, ovata, convexa, obscura, cinereo pollinosa; antennæ corporis dimidio vix breviores; cornicula corporis decima longitudine; pedes albi, femoribus tibiisque apice tarsisque nigris.

The viviparous wingless female. Black, oval, convex, small, not shining, with a slight gray bloom: feelers nearly half the length of the body: nectaries about one-tenth of the length of the body: legs white; feet and tips of thighs and of shanks black. A. Rumicis, Var? From Veratrum album. Length of the body \(\frac{3}{4}\) line. Switzerland.

## 313. APHIS TRIPHAGA.

Nigra, fusiformis, viridis, aut nigro-viridis, albo pollinosa; antennæ basi flavæ, corporis dimidio vex breviores; cornicula alba, apice nigra, corporis decima non longiores; pedes flavi, tibiis apice genubus tarsisque nigris.

The viviparous wingless female. Small, spindle-shaped, very variable in colour, being either black, dark olive-green, or dull red, always covered with white bloom: feelers black, pale yellow towards the base, hardly half the length of the body: mouth pale yellow, with a black tip: nectaries white, hardly one-tenth of the length of the body; tips black: legs pale yellow, moderately long; knees, feet, and tips of shanks black. On Epilobium.

England.

## 314. Aphis inhærens.

Pallide flava, subovata, depressa, setosa; antennæ gracillimæ, corporis dimidio paullo breviores; cornicula brevissima; pedes breves.

The viviparous wingless female. Pale yellow, flat, bristly, increasing in breadth from the head till near the tip of the abdomen: mouth nearly reaching the middle hips: feelers very slender, rather less than half the length of the body; fourth joint much shorter than the third; fifth a little shorter than the fourth; sixth as long

3 Y

as the fifth; seventh a little longer than the sixth: front convex in the middle with a slight tubercle on each side: eyes dark piceous, prominent: legs slender, rather short; fore-legs but little shorter than the hind legs; shanks straight: nectaries less than one-twentieth of the length of the body. On the Birch. Length  $\frac{3}{4}$  line. England.

#### 315. APHIS IMPINGENS.

Flava, depressa, subovata; antennæ corporis quadrante breviores; cornicula nulla; pedes breves, validi.

The viviparous wingless female. Body yellow, rather flat, increasing in breadth from the head till near the tip of the abdomen: head forming a half circle, rounded in front: eyes piceous, on the top of the head, not on the sides as is usual: feelers not one-fourth of the length of the body; first and second joints short; fourth much shorter than the third; fifth and sixth of moderate length; seventh very short: mouth not reaching much beyond the fore-hips; fore-chest moderately large; sides convex; nectaries not rising above the surface of the abdomen: legs short, rather stout; fore-legs seated some way in advance of the fore hinder legs: abdomen rounded behind. On the Birch. Length of the body \( \frac{3}{4} \) line.

England.

## 316. APHIS DIPHAGA.

Aptera. Parva, ovata, convexa, obscuré flava, viridi varia; antennæ flavæ, apice nigræ, corpore paullò longiores; cornicula viridia, corporis quadrante vix breviores; pedes longi, flavi, tibiis apice tarsisque nigris.

Alata. Nigravel nigro-fusca, nitens, linearis, pedes flavi; femoribus tibiisque apice tarsisque nigris; alæ limpidæ.

The viviparous wingless female. Small, oval, convex, smooth, not shining, pale yellow, and mottled with green: feelers pale yellow with black tips, a little longer than the body: mouth pale yellow with a black tip: nectaries dark green, about one-fourth of the length of the body: legs long, pale yellow; feet and tips of the shanks black.

The viviparous winged female. Linear, shining, black or very dark brown: feelers and nectaries black: legs pale yellow: feet, tips of thighs and shanks black: wings nearly twice the length of the body; wing-ribs and rib-veins pale yellow; brand and veins very pale brown. On Epilobium.

England.

## 317. APHIS SALVIÆ.

Nigra, sat gracilis; antennæ validæ, corpore paullò breviores; cornicula corporis quinta parte vix breviores; tibiæ pallidæ subpilosæ; alæ hyalinæ.

The viviparous winged female. Black, rather slender: feelers rather stout, a little shorter than the body; fourth joint much shorter than the third; fifth a little shorter than the fourth; sixth a little shorter than the fifth; seventh a little longer than the sixth: nectaries about one-fifth of the length of the body: legs rather long: shanks pale, somewhat hairy: wings colourless; distance between the first and second veins much more than twice farther at the tips than at the base; third vein almost twice farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork very much nearer to the second fork than to the third vein, a little nearer to the third vein than the third is to the second; second fork a little nearer to the first fork than to the fourth vein; fourth vein curved, straight near the tip, much nearer to the second fork than to the tip of the rib-vein. From Salvia pratensis. Length of the body 1 line; of the wings 3 lines.

a. Switzerland. Presented by F. Walker, Esq.

## 318. APHIS PALANS.

Oleaginea, longa, linearis, subcylindrica, albo pollinosa; antennæ nigræ, corporis triente non longiores; pedes breves, virides, tibiis apice tarsisque nigris.

The wingless female. Olive-green, long, linear, almost cylindrical, powdered with white: feelers black, setaceous, about one-third of the length of the body: legs dull green, short; hips, feet, and tips of shanks black.

England.

#### 319. APHIS REDUCTA.

Viridi-fulva, convexa, subovata; antennæ graciles, corpore multo longiores; cornicula corporis decima longitudine; pedes longi, graciles.

The viviparous wingless female. Greenish-tawny, convex, pear-shaped; front straight, bristly: feelers slender, much longer than the body; fourth joint much shorter than the third; fifth a little shorter than the fourth; sixth a little more than half the length of the fifth; seventh almost as long as the fifth and sixth: abdomen more than twice the breadth of the chest, with a style at the tip: nectaries a little shorter than the style, and about one-tenth of the length of the body: legs long and slender. From the Sea Wormwood. Length of the body 1 line.

England.

#### 320. Aphis persequens.

Viridis, ovata, convexa; antennæ gracillimæ, corpore longiores; cornicula corporis quadrante longitudine; pedes longi, graciles; alæ hyalinæ.

The viviparous wingless female. Allied to A. Ulmariæ. Pale green, oval, convex: front narrow: feelers very slender; first joint stout, seated on a protuberance; fourth much shorter than the third; fifth a little shorter than the fourth; sixth not half the length of the fifth; seventh longer than the third: abdomen with a very short style: nectaries slender, as long as one-fourth of the body: legs long and slender.

The viviparous winged female. Wings colourless; veins pale; distance between the first and second veins much more than twice farther at the tips than at the base; third a little nearer to the second at the base than at the tip, a little nearer to the second at the base than the second is to the first; first fork much nearer to the second fork than to the third vein, not nearer to the third vein than the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein slightly curved, much nearer to the tip of the second fork than to the tip of the rib-vein. From the Tansy. Length of the body 1½ line; of the wings 2 lines.

Var. Second and third veins united by a cross-vein; fourth wanting towards the tip.

England.

## 321. APHIS MENTHÆ.

Pallide flava, subfusiformis; antennæ graciles, corpore paullò longiores; cornicula corporis octava longitudine; pedes graciles sat longi.

Pale yellow, almost spindle-shaped: front narrow: feelers slender, a little longer than the body; first joint seated on a tubercle; fourth much shorter than the third; fifth a little shorter than the fourth; sixth shorter than the fifth; seventh long, slender: abdomen with a very short style: nectaries about one-eighth of the length of the body: legs slender, rather long. From Mentha hirsuta. Length of the body  $\frac{1}{2}$  line.

England.

#### 322. APHIS TENTANS.

Fulva, ovata, convexa; antennæ corporis dimidio non longiores; cornicula brevissima; pedes breves.

Tawny, oval, convex! front narrow, slightly convex: feelers about half the length of the body; fourth joint a little shorter than the third; fifth much shorter than the fourth; sixth shorter than the fifth; seventh as long as the fifth and sixth: nectaries about one-twentieth of the length of the body: legs short. From Mentha hirsuta. Length of the body  $\frac{1}{2}$  line.

England.

## 323. APHIS ASCITA.

Aptera. Flavo-viridis, ovata, convexa; antennæ corporis paullò longiores; cornicula obscura, corporis decima non longiores.

Alata. Thoracis discus nigricans; alæ hyalinæ.

The viviparous wingless female. Yellowish-green, oval, convex: front slightly convex: feelers a little longer than the body;

fourth joint much shorter than the third; fifth a little shorter than the fourth; sixth shorter than the fifth; seventh longer than the fifth and the sixth: abdomen with a very short style at the tip: nectaries darker than the body, and about one-tenth of its length: legs of moderate length.

The viviparous winged female. Disk of the chest dark: wings colourless; distance between the first and second veins much more than twice farther at the tips than at the base; third much farther from the second at the tip than at the base, much farther from the second at the base than the second is from the first; first fork as near to the third vein as to the second fork, much nearer to the third vein than the third is to the second; second fork nearer to the first fork than to the fourth vein; fourth vein curved, almost straight towards the tip, as far from the second fork as from the tip of the ribvein. From the leaves of the Melon and the Cucumber. Length of the body  $\frac{1}{2}$  line; of the wings  $1\frac{1}{2}$  line.

England.

#### 324. APHIS RANUNCULINA.

Pallide flava, fere elliptica; fronte angusta, utrinque tuberculata; antennis corpore paullò longioribus; corniculis pedibusque sat longis.

Pale yellow, almost elliptical: front narrow: feelers slender, a little longer than the body; first joint seated on a slight tubercle; fourth more than half the length of the third; fifth shorter than the fourth; sixth much shorter than the fifth; seventh more than twice the length of the sixth; nectaries about one-sixth of the length of the body: legs slender, rather long. Length of the body  $\frac{3}{4}$  line.

a-h. England. (In Canada Balsam). From Mr. Walker's collection.

325. Aphis ----?

Aphis Zew, Curt. Ruricola, Gard. Chron. ii. 4, 1842. England.

## 326. Aphis ——?

Aphis Saliceti, Harris, Ins. Mass. 190. United States.

## Genus 2. SCHIZONEURA.

Schizoneura, Hartig, Germ. Ent. Zeit. iii. 367, pl. 1, f. 23, 24. Kalt. Ratz.

Aphis, p., Linn., Deg., Fabr., Schrank, Rossi, Gmel., Hausmann, Fonscol., Harris.

Eriosoma, Leach, Samouelle, Westw., Mosley, Fitch.

Myzoxylus, Blot, Mem. Soc. Linn. Calvados, i. 114. Latr. Tougard, Amyot et Serv.

Coccus, Bingley. Cinara, p., Curtis.

Mimaphidus, Rondani Osservazioni sopra parecchie specie di esapodi Afidicidi; Nuovi Annali delle Serinye Naturali di Bologna, 1847.

## 1. SCHIZONEURA CORNI.

Schizoneura Corni, Hartig, Germ. Ent. Zeit. iii. 367. Kalt. Mon. Pflan. 168, 1.

Aphis Corni, Fabr. Sp. Ins. ii. 385, 15. Mant. Ins. ii. 315, 18. Syst. Ent. 736, 13. Ent. Syst. iv. 214, 19. Syst. Rhyn. 297, 19. Gmel. Ed. Syst. Nat. i. 2204, 47. Schrank, Faun. Boic. ii. 106, 1188. Rossi, Faun. Etrusc. 261, 1376. Fonscol. Ann. Soc. Ent. Fr. x. 188, 30.

Cornifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483.

Small, black: the base of the abdomen paler: feelers rather more than half the length of the body: mouth yellow, with a black tip: legs black, moderately long; fore-thighs yellow at the base: wings slightly tinged with gray, much longer than the body; wingribs pale; veins and brand black; the latter large almost elliptical; distance between the first and second veins at the base about one-third of that between them at the tips; second vein very slightly undulating; third vein much nearer to the second towards the base than at the tip, nearer to the second at the tip than the second is to the first; fork at the tip farther from the third vein than the third

is from the second, as far from the third vein as from the fourth; fourth curved near the base, straight towards the tip, farther from the rib-vein than from the fork.

Var. Second vein more undulating, about six times farther from the first at the tip than at the base.

a. England. Presented by F. Walker, Esq.

#### 2. SCHIZONEURA LANIGERA.

Aphis lanigera, Hausmann, Illig. Mag. i. 440, 50. Sir Joseph Banks, Hort. Soc. Trans. ii. 162, pl. 11. Forsyth, 265, Monthly Mag. xxxii. 320 (and for August, 1811). Gard. Mag. Jan. 1828. Kirby & Spence, Intr. Ent. i. 29, 200; ii. 225; iii. 182. Salisbury, Hints on Orchards, 39. Knapp, Journ. Naturalist, Buel, New Engl. Farmer, vii. 169; ix. 178. Harris, Ins. New Engl. 193, 1843, 267, 3454. Ann. Sci. Nat. 1831. D'Arcilly, Bull. Acad. Ebb. 1834. Audouin, Ann. Soc. Ent. Fr. iv. 9, App. Goureau, Ann. Soc. Ent. 2me Série, ii.

Coccus Mali, Bingley, Anim. Biog. iii. 200.

Eriosoma Mali, Leach, MSS. Samouelle, Comp. i. 16. Sir Oswald

Mosley, Gard. Chron. i. 828.

Myzoxylus Mali, Blot, Mem. de la Soc. Linn. du Calvados, i. 114, 1824. Mem. Soc. Agric. de Caen, 1830, 58. Latr. Fam. Nat. 4207. Amyot et Serv. Hist. Nat. Hém. 612. Tougard, Ann. Soc. Hortic. Paris, xiv. 341.

Schizoneura lanigera, Hartig, Germ. Ent. Zeit. iii. 367. Kalt. Mon.

Pflan. i. 169, 2.

Aphis (Schizoneura) lanigera, Ratz. Forst. Ins. iii. 221, 31.

Myzoxylus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 481, 532. Lachnaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483.

Eriosoma lanigera, Ruricola, Gard. Chron. iv. 116. Fitch, The

Senate, No. 30, 67.

a-o. England. (In Canada Balsam). From Mr. Walker's collection.

## 3. Schizoneura Lanuginosa.

Schizoneura lanuginosa, Hartig, Germ. Mag. iii. 367. Kalt. Mon. Pflan. 170, 3.

Aphis (Schizoneura) lanuginosa, Ratz. Forst. Ins. iii. 220, 1, pl. 13, f. 1.

Aphis, Réaum. Ins. iii. Hausm. Ill. Mag. i. 440. Aphis Ulmi, Fonscol. Ann. Soc. Ent. Fr. x. 190, 33. Lachnodaphis, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483. Europe.

## 4. SCHIZONEURA TREMULÆ.

Schizoneura Tremulæ, Kalt. Mon. Pflan. 171, 4. Aphis (Schizoneura) Tremulæ, Ratz. Forst. Ins. iii. 222, 32.

Aphis Tremulæ, Deg. Ins. iii. 62, 15, pl. 7, f. 1—7. Linn. Syst. Nat. ii. 736, 28. Faun. Suec. 997. Gmel. Ed. Syst. Nat. i. 4, 2208, 28. Fabr. Syst. Rhyn. 302, 55. Stew. El. Nat. Hist. ii. 111.

Tremulifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483. Europe.

# 5. Schizoneura Ulmi.

Aphis Ulmi, Linn. Syst. Nat. ii. 733, 2. Faun. Suec. 976. It. Scand. 203. Fabr. Sp. Ins. ii. 385, 7. Mant. Ins. ii. 316, 37. Ent. Syst. iv. 217, 36. Syst. Rhyn. 299, 37. Gmel. Ed. Syst. Nat. i. 2202, 2. Réaum. Ins. iii. 281—350, pl. 25, f. 4—7. Geoff. Ins. Par. i. 494, 1, pl. 10, f. 3. Deg. Ins. iii. 81, 13, pl. 5, f. 7—18. Bonnet, Hist. Nat. i. 8, pl. 1, f. 3. Latr. Gen. iii. 173. Schrank, Faun. Boic. ii. 1, 109. Rossi, Faun. Etrusc. 263, 1391. Berk. Syn. i. 119. Stew. El. Nat. Hist. ii. 110. Turt. Syst. Nat. ii. 706. Shaw, Gen. Zool. vi. pl. 58, f. inf. Fonscol. Ann. Soc. Ent. Fr. x. 190, 33. St. Farg. et Serv. x. 248. Nouv. Dict. Hist. Nat. xxviii. 254.

Aphis foliorum-Ulmi, Deg. Ins. iii. 13, pl. 5, f. 7—22. Eriosoma Ulmi, Sir Oswald Mosley, Gard. Chron. i. 828. Schizoneura Ulmi, Kalt. Mon. Pflan. i. 173, 5. Aphis (Schizoneura) Ulmi, Ratz. Forst. Ins. iii. 221, 29. Chermes Ulmi? Burm. Handb. Ent. ii. 91, 3. Schizoneura, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483, 533. Cinara Gallarum-Ulmi? Ruricola, Gard. Chron. iv. 37.

Dull black; feelers stout, black, moniliform, slightly setaceous, shorter than the body: abdomen very short, slightly covered with gray filaments: legs moderately long: wings colourless, very much longer than the body; wing-ribs black; brand and veins brown; brand linear, rather long, acutely angular at each end; distance

between the first and second veins at the tips full eight times that between them at the base; third vein nearer to the second towards the base than at the tip, much nearer to the second at the tip than the second is to the first; fork not nearer to the third vein than the third is to the second, nearer to the fourth vein than to the third; fourth vein long, straight, slightly curved near the base, much nearer to the fork than to the tip of the rib-vein.

a—z. England. (In Canada Balsam). From Mr. Walker's collection.

#### 6. SCHIZONEURA REAUMURI.

Schizoneura Reaumuri, Kalt. Mon. Pflan. 175, 6, f. 4, 5. Aphis, &c., Réaum. Ins. iii. pl. 23, f. 1—3. Aphis (Schizoneura) Reaumuri, Ratz. Forst. Ins. iii. 221, 30. Europe.

## 7. SCHIZONEURA COSTATA.

Schizoneura costata, Hartig, Germ. Ent. Zeit. iii. 367. Lachnus costatus, Hartig, Jahresbericht. Germany.

## 8. SCHIZONEURA ALBA.

Aphis (Schizoneura) alba, Ratz. Forst. Ins. iii. 222, 34, pl. 13, f. 3. Germany.

## 9. SCHIZONEURA STIGMA.

Cinara stigma, Curt. Ruricola, Gard. Chron. iv. 37, 1844.

Wings whitish: brand black, broad, irregularly elliptical; distance between the first and second veins at the base hardly one-sixth of that between them at the tips; third vein nearer to the second towards the base than at the tip, nearer to the second at the tip than the second is to the first; fork much nearer to the fourth vein than to the third, farther from the third than the third is from the second; fourth vein long, straight, slightly curved near the base, more than twice farther from the tip of the rib-vein than from the fork.

England.

## 10. SCHIZONEURA OBSCURA.

Nigra; alæ cinereæ, stigmate nigro lato subovato.

Black, a little broader than S. Corni: wings gray; brand black, broad, almost oval; distance between the first and second veins at the base hardly one-fourth of that between them at the tips; third vein nearer to the second towards the base than at the tip, nearer to the second than the second is to the first; fork much nearer to the fourth vein than to the third, a little farther from the third than the third is from the second; fourth vein moderately long, straight, curved near the base, much nearer to the tip of the fork than to the rib-vein. Length of the body  $\frac{3}{4}$ —1 line; of the wings  $2\frac{1}{2}$ — $2\frac{3}{4}$  lines.

a. England. Presented by J. C. Dale, Esq.

## 11. SCHIZONEURA TURBIDA.

Nigra; alæ cinereæ, stigmate fusco sat lato subfusiformi.

Black, rather slender: wings gray; brand brown, rather broad, irregularly spindle-shaped, acutely angular at each end; distance between the first and second veins at the base not more than one-eighth of that between them at the tips; third vein nearer to the second towards the base than at the tips, not half so far at the tips from the second as the second is from the first; fork hardly nearer to the third vein than to the fourth, hardly nearer to the third than the third is to the second; fourth vein long, straight, slightly curved towards the base, much nearer to the fork than to the tip of the ribvein. Length of the body 1 line; of the wings 3 lines.

England.

# 12. SCHIZONEURA ALBIPENNIS.

Nigra; alæ albæ, stigmate nigrofusco sublineari, venis albis.

Black, thick, rather broad: feelers shorter than the body: wings white; brand dark brown, rather broad, almost linear, forming an obtuse angle at the base of the fourth vein, and an acute angle at the tip; veins white, very indistinct. Length of the body 1 line; of the wings 3 lines.

England.

## 13. SCHIZONEURA? LANATA.

Aphis lanata, Zett. Ins. Lapp. i. 2, 311, 5. Lapland.

#### 14. SCHIZONEURA? PYRI.

Eriosoma Pyri, Fitch, The Senate, No. 30, 68. New York.

## 15. Schizoneura? Tessellata.

Eriosoma tessellata, Fitch, The Senate, No. 30, 68. New York.

## 16. SCHIZONEURA? IMBRICATOR.

Eriosoma imbricator, Fitch, The Senate, No. 30, 68. New York.

## Genus 3. THELAXES.

Thelaxes, Westw. Intr. Ent. i. 118. Vacuna, Von Heyden, Kalt. Mon. Pflan. 177. Ratz.

# 1. THELAXES BETULÆ.

Vacuna Betulæ, Heyden, Kalt. Mon. Pflan. 177, 1, f. 19—21. Aphis (Vacuna) Betulæ, Ratz. Forst. Ins. iii. 223, 38. Tremulinax, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483.

Var. Green, with dark brown bands: head black.

a-c. England. (In Canada Balsam). Presented by F. Walker, Esq.

## 2. THELAXES DRYOPHILA.

Aphis dryophila, Schrank, Faun. Boic. ii. 1, 113. 1210. Vacuna dryophila, Heyden, Kalt. Mon. Pflan. 178, 2. Aphis (Vacuna) dryophila, Ratz. Forst. Ins. iii. 223. Vacuda, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 483, 534. Cinaria Quercûs, Sir Oswald Mosley, Gard. Chron. i. 621. Var. Reddish brown, broad, short-oval, slightly convex, red towards the head and along the middle of the body, which beneath is dull pale red and covered with a white bloom: feelers black, not one-fourth of the length of the body: mouth pale red, with a black tip, reaching the hind-hips.

Var. Pale green, with a white stripe from the head extending along two-thirds of the back: feelers and legs white; the former are not half the length of the body: mouth white, with a black tip. When very young it is pale yellow, with two vivid irregular green stripes on the back.

Var. Feelers whitish, not one half the length of the body: mouth whitish, with a brown tip, extending a little beyond the hind hips: legs whitish; feet and tips of shanks brown. As it grows it becomes broader, and acquires a red hue, which first appears about the head and the chest, and afterwards overspreads the whole body. When full-grown, the head, feelers, legs, some spots on each side of the thorax, and the greater part of the back of the abdomen are very dark red, and it is covered with white bloom: mouth pale green, reaching beyond the middle-hips; its tip is brown. During its growth it exhibits many varieties and shades of colour between green and pale red and dark red, and is sometimes mottled with all these hues.

The viviparous winged female. Dark brown: abdomen pale brown: feelers pale brown, dark brown at the base, more than half the length of the body: mouth brown: legs pale brown: wings colourless, horizontal when at rest, much longer than the body; wingribs and veins brown.

a-o. England. (In Canada Balsam). From Mr. Walker's collection.

## Genus 4. PEMPHIGUS.

Pemphigus, Hartig, Germ. Ent. Zeit. iii. 366, pl. 1, f. 21, 22. Kalt., Westw.

Aphis, p., Linn., Fabr., Rossi, Schrank, Sulz., Gmel., Kirby & Spence, Fonscol.

Eriosoma, Heyden, Mosley, Jenyns.

Aphioides et Baizongia, Rondani Osservazioni, &c. Nuovi Annali delli Scienze Naturali di Bologna, 1847, 64.

#### 1. PEMPHIGUS GNAPHALII.

Pemphigus Gnaphalii, Kalt. Mon. Pflan. 180, 1. Aphis Filaginis? Fonscol. Ann. Soc. Ent. Fr. x. 188, 31.

The wingless female. Oval, pale yellowish green or dark gray, thickly covered with white powder: feelers black: mouth pale yellow, with a black tip, reaching the middle-hips: eyes black: legs dull yellow, moderately long; feet and tips of shanks black; thighs sometimes black.

a-c. Scotland. Presented by J. Hardy, Esq.

## 2. Pemphigus affinis.

Pemphigus affinis, Kalt. Mon. Pflan. i. 182, 2, f. 15. Aphis (Pemphigus) affinis, Ratz. Forst. Ins. iii. 222, 36. Aphis ———? Réaum. Ins. iii. pl. 27, f. 5, 6. Europe.

## 3. Pemphigus bursarius.

Pemphigus bursarius, Kalt. Mon. Pflan. 182, 3, f. 13, 14. Aphis (Pemphigus) bursarius, Ratz. Forst. Ins. iii. 222, 35. Aphis bursaria, Linn. Syst. Nat. ii. 756, 29. Faun. Suec. 998. It. Scand. 311. Fabr. Sp. Ins. ii. 385, 8. Mant. Ins. ii. 315, 9.

Scand. 311. Fabr. Sp. Ins. ii. 385, 8. Mant. Ins. ii. 315, 9. Ent. Syst. iv. 212, 9. Syst. Rhyn. 295, 9. Geoff. Ins. Par. i. 497, 11. Hofm. Altd. Hort. 51. Seba, Mus. i. pl. 38, f. 8. Jung. Verm. 161, 162. Rüpp. Jenens. iii. 333. Hort. Amb. pl. 96. Merian, Ins. Europ. i. 15, pl. 42. Swammerd. Ins. 45, f. 22—25. Réaum. Ins. iii. pl. 26, f. 7—11. Gmel. Ed. Syst. Nat. i. 4, 2208, 29. Schrank, Faun. Boic. ii. 113, 1211. Stew. El. Nat. Hist. ii. 111. Turt. Syst. Nat. ii. 703, Hausm. Ill. Mag. i. 434, 1. Burm. Handb. Ent. ii. 189, 1. Kirby & Spence, Intr. Ent. i. 451. Fonscol. Ann. Soc. Ent. Fr. x. 193, 33.

Eriosoma Populi, Sir Oswald Mosley, Gard. Chron. i. 828. Pemphigus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 484, 535. Aphioides bursaria, Rondani, Osservazioni, &c. 64, 847. Eriosoma bursaria, Ruricola, Gard. Chron. iv. 164.

a-z. England. (In Canada Balsam). From Mr. Walker's collection.

## 4. PEMPHIGUS BUMELIÆ.

Pemphigus Bumeliæ, Kalt. Mon. Pflan. 184, 4.

Aphis (Pemphigus) Bumeliæ, Ratz. Forst. Ins. iii. 223, 37.

Aphis Bumeliæ, Schrank, Faun. Boic. ii. 102.

Eriosoma Bumeliæ, Heyd. Mus. Senk. ii. 3, 295.

Bumelifex, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 484.

a, b. Prussia. Presented by F. Walker, Esq.

c—e. —?

#### 5. Pemphigus Ranunculi.

Pemphigus Ranunculi, Kalt. Mon. Pflan. 185, 5.

Aphis Polyanthis? Sulz. Ins. 105, pl. 11, f. 4, 5. Gmel. Ed. Syst.

Nat. i. 4, 2209, 61.

Aphis Graminis? Réaum. Ins. iii. 339.

Aphis radicum? Fonscol. Ann. Soc. Ent. Fr. x. 195, 37.

Eriosoma Lactucæ? Sir Oswald Mosley, Gard. Chron. i. 828. Jenyns.

Pemphigus Lactucæ? Westw. Gard. Chron.

Aphis of the China Aster? Rusticus, Ent. Mag. i. 218. Harris, Ins. Mass. 190.

The wingless female. Lives on roots throughout the year, and is enveloped in the white cottony matter which exudes from its body. Elliptical, pale greenish yellow or pale yellow, very plump; the sutures of its segments indistinct: feelers brown or dull yellow, with a brown tip to each joint: mouth brown or yellow, reaching the middle-hips or the hind-hips: legs brown or yellow, rather short, slender, weak; hips small, far apart; shanks as long as the thighs; feet very short; knees, feet, and tips of shanks sometimes black.

The winged female. Appears in the middle of September, and continues till the middle of October. While a pupa yellow: forechest large; middle-chest, hind-chest, and segments of the abdomen short, and of nearly equal size: feelers gray, as long as one-fourth of the body: eyes black: mouth pale yellow, with a gray tip: abdomen pale yellow: legs gray, short: rudimentary wings dark. With a white bloom when the wings are developed: fore-chest dark green, subquadrate; its breadth twice its length: feelers black, moniliform: mouth pale green, with a black tip: legs black, moderately

long; thighs pale green at the base: wings a little longer than the body; wing-ribs yellow or pale green; brand brown, with a dark brown border; veins brown.

a—c. Prussia. Presented by F. Walker, Esq.
 d—r. England. (In Canada Balsam). From Mr. Walker's collection.

## 6. Pemphigus Degeeri.

Pemphigus Degeeri, Kalt. Mon. Pflan. 186, 6. a—d. Prussia. Presented by F. Walker, Esq.

## 7. Pemphigus Xylostei.

Pemphigus Xylostei, Kalt. Mon. Pflan. 187, 7. Aphis Xylostei, Deg. Ins. iii. 96, 16, pl. 7, f. 8. Turt. Syst. Nat. ii. 709.

Pemphigus Loniceræ, Hartig, Germ. Zeit. Ent. iii. 367. Xylosthætins, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 484.

a, b. Prussia. Presented by F. Walker, Esq.

# 8. Pemphigus Pedunculi.

Pemphigus Pedunculi, Hartig, Germ. Ent. Zeit. iii. 367. Germany.

# 9. Pemphigus Fraxini.

Pemphigus Fraxini, Hartig, Germ. Ent. Zeit. iii. 367.

Aphis Fraxin? Geoff. Ins. Par. i. 494, 2. Fabr. Sp. Ins. ii. 386,
19. Mant. Ins. ii. 316, 23. Ent. Syst. iv. 215, 23. Syst. Rhyn.
297, 23. Gmel. Ed. Syst. Nat. i. 2206, 53. Stew. El. Nat.
Hist. ii. 110. Turt. Syst. Nat. ii. 705. Samouelle, Comp. i. 4.
Kalt. Mon. Pflan. i. 140, 106.

Germany.

#### 10. Pemphigus Americanus.

Nigra, albo lanuginosa; alis subcinereis, stigmate et venis nigrofuscis.

A little smaller and more slender than P. Bumeliæ; brand darker than that of P. Xylostei; distinguished from both species by its darker veins. Black, covered with white cotton-like matter: wings slightly gray; brand and veins dark brown. Length of the body 1 line; of the wings 4 lines.

a-d. Nova Scotia. From Lieut. Redman's collection.

#### 11. Pemphigus globosus,

Pallide viridis, globosa, pollinosa; thorax in alato obscurus.

Pale green, short, broad, almost globose, thickly covered with white powder: feelers short: rib-vein diverging much from the fore border beneath the brand, converging more abruptly to it beyond the base of the fourth vein; first and second veins united at the base, diverging much from thence to the tips; third vein simple, wanting for one-third of the length from the base, nearer to the second at the tip than the second is to the first; fourth slightly curved near the base, straight from thence to the tip, as near to the third vein as to the tip of the rib-vein. From the roots of the Scarlet Runner, in November.

a-r. England. (In Canada Balsam). From Mr. Walker's collection.

## 12. PEMPHIGUS? PISTACIÆ.

Aphis Pistaciæ, Linn. Syst. Nat. ii. 737, 33. Fabr. Sp. Ins. ii. 389, 42. Mant. Ins. ii. 317, 47. Ent. Syst. iv. 219, 48. Syst. Rhyn. 301, 48. Gmel. Ed. Syst. Nat. i. 14, 2209, 33. Siml. Vit. Ges. 49. Camer. Epit. 51. Lob. Icon. 100. Dodon. Pempt. 780. Bauh. Hist. i. 279. Theodr. Hist. 1439. Réaum. Hist. Nat. Ins. iii. 281, 350, pl. 24, f. 6, pl. 25, f. 1—3. Rossi, Faun. Etrusc. 264, 1399. Hofmann, Edl. von Hofmannsthal (Die Caruba di Guidea), 1842. Kirby & Spence, Intr. Ent. i. 451. Fonscol. Ann. Soc. Ent. Fr. x. 192, 34. Kalt. Mon. Pflan. 140, 108. Ferussac, Nouv. Bull. Sci. iii. Bull. Soc. Phil. 1812, 1813.

Baizongia Pistaciæ, Rondani, Osservazioni, &c. Nuovi Annali della Scienze Naturali di Bologna, 64, 1847.

South of Europe.

## 13. Pemphigus? Sinensis.

The insect forming the Chinese galls, Doubleday, Pharm. Journ. vii. 310.

"Chest and abdomen becoming gradually wider to the tip of the abdomen, which is rounded at the outer angle, and emarginate in the middle of the hind margin: feelers five-jointed, short, rather stout, about half as long as the body; first and second joints short and stout; second longer than the first; third much longer, equal to both first and second combined; fourth rather longer than the second, broadest at the tip; fifth about equal in length to the third and fourth combined, subfusiform, contracted a little before the tip: labrum short, pointed: mouth short, dilated before the tip: legs short; feet apparently two-pointed, furnished with two claws."

a. China.

## 14. PEMPHIGUS? OLEÆ.

Eriosoma Oleæ, Leach, Risso, Hist. Nat. des Prin. Prod. de l'Eur. Merid. v.

Thorax gray: head dirty green: eyes purplish violet-black: antennæ gray: their tips purplish black: abdomen and back inclining to green: legs gray: wings purplish brown: last segment of the abdomen purplish black.

South of Europe.

# Genus 5. TETRANEURA.

Tetraneura, Hartig, Germ. Ent. Zeit. iii. 366. Kalt. Aphis, p., Geoff., Reaum., Deg., Von Gleichen. Byrsocrypta, Haliday, Westw.

## 1. Tetraneura Ulmi.

Tetraneura Ulmi, Hartig, Germ. Ent. Zeit. iii. 366. Kalt. Mon.

Pflan. 189, 1, f. 10-12.

Aphis (Tetraneura) Ulmi, Ratz. Forst. Ins. iii. 222, pl. 13, f. 2. Aphis galbarium Ulmi, Geoff. Ins. Par. i. 494, 1, pl. 10, f. 3. Réaum. Ins. iii. 299, pl. 25, f. 4—7. Deg. Ins. iii. 89, 14, pl. 4, f. 15—17. Von Gleichen, Vers. Gesch. Blattl. Ulm. i. 21. Bonnet, Hist. Nat. i. 8, pl. 1, f. 3. Gmel. Ed. Syst. Nat. i. 4, 2210, 72.

Tetraneura, Amyot, Ann. Soc. Ent. Fr. 2me Série, 484, 536. Byrsocrypta Ulmi gallarum, Haliday, Ann. Nat. Hist. 1839, 189.

Europe.

## 2. Tetraneura pallida.

Byrsocrypta pallida, Haliday, Ann. Nat. Hist. 1839, 189. England.

## 3. TETRANEURA ALBA.

Tetraneura alba, Ratz. Forst. Ins. iii. 222, pl. 13, f. 3. Germany.

# 4. Tetraneura nigricornis.

Tetraneura nigricornis, Hartig, Jahresb. iii. 366. Germany.

## 5. Tetraneura? Hamamelidis.

Byrsocrypta hamamelidis, Fitch, The Senate, No. 30, 69. New York.

#### Genus 6. RHIZOBIUS.

Rhizobius, Burm. Handb. Ent. ii. 1, 87. Hartig, Kalt.

## 1. RHIZOBIUS PILOSELLÆ.

Rhizobius Pilosellæ, Burm. Handb. Ent. ii. 1, 87, 1. Kalt. Mon. Pflan. 208, 1, f. 35.
Rhizobius, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 486, 540.
Germany.

#### 2. RHIZOBIUS PINI.

Rhizobius Pini, Burm. Handb. Ent. ii. 1, 87, 2. Hartig, Forst. Conversat. Lexikon, 8, 31, 33. Germ. Ent. Zeit. iii. 363, pl. 1, f. 11, 12. Kalt. Mon. Pflan. 208, 2. Germany.

#### 3. RHIZOBIUS SUBTERRANEUS.

Rhizobius subterraneus, Kalt. Mon. Pflan. 209, 3, f. 35. Prussia.

# Genus 7. RHIZOTERUS.

Rhizoterus, Hartig, Germ. Ent. Zeit. iii. 363. Forda, Heyden, Kalt.

## 1. RHIZOTERUS VACCA.

Rhizoterus vacca, Hartig, Germ. Ent. Zeit. iii. 363. Forda formicaria, Heyden, Kalt. Mon. Pflan. 209, 1, f. 33. Forda, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 486, 541.

Very small, dull yellow from the head to more than half the length, dull green and slightly decreasing in breadth from thence to the tip of the abdomen, which is hardly convex, and has a rim on each side: front hairy, convex: mouth pale yellow, with a black tip, which appears just beyond the tip of the abdomen: feelers and legs slightly hairy: feelers clavate, much more than half the length of the body, pale yellow, brown towards the tips; first and second joints short; third very long; fourth and fifth of moderate length; sixth short, dart-shaped, much narrower and shorter than the fifth. On Sowthistle roots. Length of the body  $\frac{1}{2}$  line, or less.

Var.? Broader than long, pale dull green: feelers near half the length of the body: mouth a little shorter than the body, or much more than half its length. The young ones are green, and their mouths are longer than the body. Found by Mr. Hardy, under stones, near Newcastle.

a. England. (In Canada Balsam). Presented by F. Walker, Esq.

b, c. Prussia. Presented by F. Walker, Esq.

#### 2. RHIZOTERUS? ZEÆ.

Coccus Zew Maidis, Léon Dufour, Ann. Sci. Nat. ii. 204, pl. 10, f. 1.

France.

#### Genus 8. TRAMA.

Trama, Heyden, Mus. Senk. ii. 293. Kalt. Mon. Pflan. 211. Rhizobius, Westwood.

### 1. TRAMA TROGLODYTES.

Trama troglodytes, Heyden, Mus. Senk. ii. 293, 7.

Trama Radicis, Kalt. Mon. Pflan. i. 211, 1, f. 34.

Trama, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 487, 542.

Aphis, &c., Hill, Mag. Nat. Hist. ii. 104.

Rhizobius Helianthemi, Westw. Proc. Ent. Soc. Ann. Nat. Hist. xiv. 453.

White, shining, very plump, nearly elliptical: feelers filiform, less than half the length of the body; first and second joints short; third very long; fourth and two following joints moderately long: eyes dark brown, very small, as is usual in subterranean species: mouth with a brown tip, reaching far beyond the base of the hind legs: oviduct short, with a brown tip: legs moderately long; forefeet and middle-feet black, short and curved; hind-feet long, pale and straight, their tips brown: the young ones are more narrow and linear. The hind-legs have great freedom of movement, and it often jerks them upright over its head, and the long hind-feet vibrate like feelers. It occasionally, but very rarely, acquires wings.

a-m. England. (In Canada Balsam). From Mr. Walker's collection.

#### Genus 9. PARACLETUS.

Paracletus, Heyden, Kalt. Mon. Pflan. 212.

#### 1. PARACLETUS CIMICIFORMIS.

Paracletus cimiciformis, Heyden, Kalt. Mon. Pflan. i. 2121. Paracletius, Amyot, Ann. Soc. Ent. Fr. 2me Série, v, 487, 543.

Var.? Pale red, triangular, very narrow in front: feelers onesixth of the length of the body: nectaries black, level with the surface of the abdomen: legs short. Found by Mr. Hardy, near Newcastle, under stones, with Schizoneura Corni and Rhizoterus vacca.

The winged female. Rib-vein diverging from the fore border beneath the brand, and more abruptly converging to it beyond the base of the fourth vein; first and second veins not extending to the hind border; distance between them at the tips full thrice that at the base; third vein wanting for more than one-third of the length from the rib-vein; distance at the tip between it and the second vein a little less than that between it and its fork, and much less than that between the first and second veins; fourth vein curved near the base, straight towards the tip, much nearer to the fork of the third vein than to the tip of the rib-vein.

a. England. (In Canada Balsam). Presented by F. Walker, Esq.

b. Prussia. Presented by F. Walker, Esq.

# Genus 10. SMYNTHURODES.

Smynthurodes, Westw. Gard. Chron. 1849 or 1850?

# 1. SMYNTHURODES BETÆ.

Smynthurodes Betæ, Westw. Gard. Chron. 1849 or 1850? England.

#### Genus 11. ADELGES.

Adelges, Vallot. Aphis, p., Deg.

Chermes, p., Linn., Fabr., Gmel., Frisch., Schrank, Hartiy, (Germ.

Ent. Zeit. 366, pl. 1, f. 17, 18).

Psylla, p., Geoff., Kalt., Ratz.

Eriosoma, p., Mosley. Sacchiphantes, Curtis.

#### 1. Adelges Laricis.

Chermes Laricis, Hartig, Jahresberichte, i. 4, 8. Germ. Zeit. Ent. iii. 366. Kalt. Mon. Pflan. 194. Ratz. Forst. Ins. iii. 202, pl. 13, f. 5.

Laricethus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 485, 538, pl.

7, f. 96, 97.

The White Bug, Newton, Journ. Agric. New Series, No. 15, 609. Eriosoma Laricis, Sir Oswald Mosley, Gard. Chron. i. 828.

Adelges Laricis, Vallot.

a-c. England. Presented by F. Walker, Esq.
 d-h. England. (In Canada Balsam). From Mr. Walker's collection.

### 2. Adelges corticalis.

Chermes corticalis, Kalt. Mon. Pflan. i. 197, 2. Chermes Strobi, Hartig, Jahresb. 643. Ratz. Forst. Ins. iii. 203. Chermes Piceæ? Ratz. Forst. Ins. iii. 204.

a-k. England. (In Canada Balsam). From Mr. Walker's collection.

### 3. Adelges Abietis.

Chermes Abietis, Linn. Syst. Nat. i. 2, 738, 13. Faun. Suec. 1011.

Lach. Lapp. i. 258. Fl. Lapp. 218, 347. It. Gotl. 180. Fabr.

Sp. Ins. ii. 392, 13. Mant. Ins. ii. 318, 13. Ent. Syst. iv. 223,
13. Syst. Rhyn. 305, 13. Frisch. Ins. 12, 10, pl. 2, f. 3.

Schrank, Faun. Boic. ii. 1, 143, 1256. Clus. Pannon. 20, 21.

Gmel. Ed. Syst. Nat. i. 4, 2213, 13. Kirby & Spence, Intr.

Ent. i. 325, iv. 136. Kalt. Mon. Pflan. 200, 3. Hartig,

Convers. Lex. 145. Germ. Zeit. iii. 366. Ratz. Ent. Zeit.

Stett. iv. 204.

Psylla, &c., Geoff. Ins. Par. i. 487, 5.

Aphis gallarum Abietis, Deg. Ins. iii. 99, 17, pl. 8, f. 1—3. Burm. Handb. Ent. ii. 90, 2. De la Rue, Ent. Forest. 5, 611.

Adelges gallarum Abietis, Haliday, Ann. Nat. Hist. 1839, 190, 65, 66.

Chermes viridis, Ratz. Forst. Ins. iii. 201, pl. 12, f. 2. Elatiptus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 484, 537. Sacchiphantes Abietis, Ruricola, Gard. Chron. (1844) iv. 831.

a. England. Presented by F. Walker, Esq.
 b-n. England. (In Canada Balsam). From Mr. Walker's collection.

#### 4. Adelges strobilobius.

Chermes strobilobius, Kalt. Mon. Pflan. 203, 4, f. 24. Europe.

#### 5. Adelges coccineus.

Chermes coccineus, Ratz. Forst. Ins. iii. 200, pl. 12, f. 1. Stelk. Ent. Zeit. 1843, 202.

Germany.

# 6. Adelges? Strobi.

Eriosoma Strobi, Fitch, The Senate, No. 30, 69. New York.

# Genus ----?

Chermes Castanæ, Haldeman, Amer. Journ. Sci. and Art. Second Series, ix. No. 25, 1850, 108.

"First and third transverse veins normal, second arising from the middle of the first, terminating in the normal position; posterior wings without veins."

United States.

#### Genus 12. PHYLLOXERA.

Phylloxera, Boyer de Fonscol. Ann. Soc. Ent. Fr. iii., Hartig, Westw., Kalt., Ratz.
Vacuna, Heyden.

# 1. PHYLLOXERA QUERCUS.

Phylloxera Quercûs, Fonscol. Ann. Soc. Ent. Fr. iii. 223, pl. 1, f. 4—6, x. 196, 1. Hartig, Germ. Ent. Zeit. iii. 45, pl. 1, f. 15, 16.

Vacuna coccinea, Heyden, Mus. Senkenberg. ii. 3, 289. Phylloxera coccinea, Kalt. Mon. Pflan. 205, 1, f. 30, 32. Aphis (Phylloxera) coccinea, Ratz. Forst. Ins. iii. 223, 39. Phylloxera, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 485, 539.

a-tt. England. (In Canada Balsam). From Mr. Walker's collection.

#### Fam. III. COCCIDÆ.

Coccidæ, &c., Leach, Steph., Curt.
Gallinsecta, Latr.
Coccites et Aleyrodites, Newman.
Coccidæ (Monomera) et Aleyrodidæ (Dimera), Westw.
Coccina, Burm.
Phaceloptera, De Laporte.
Scytinelytra (Aleurodides) et Phytathelgi, Amyot et Serv.

# Genus 1. ASPIDIOTUS.

Aspidiotus, Bouché, Naturg. Ins. 9. Burm., Curt., Westw. Coccus, Gmel., Stew., Dalm., Curt. Diaspis, Costa, Faun., Regn. Nap. Gallinsetti, 19.

# 1. Aspidiotus Nerii.

Aspidiotus Nerii, Bouché, Schadl. Gart. Ins. 52, 1. Nat. Gesch. Ins. i. 12, 1, pl. 1, f. 1—5. Burm. Handb. Ent. ii. 1, 67, pl. 1, f. 10. Ruricola, Gard. Chron. iii. 588.

Europe.

PART IV.

### 2. ASPIDIOTUS ROSÆ.

Aspidiotus Rosæ, Bouché, Schadl. Gart. Ins. 53, 2. Nat. Gesch. Ins. i. 14, 2, pl. 1, f. 6. Burm. Handb. Ent. ii. 1, 68, 2.

a—d. England. Presented by W. Longman, Esq.

# 3. ASPIDIOTUS ECHINOCACTI.

Aspidiotus Echinocacti, Bouché, Schadl. Gart. Ins. 53, 3. Nat. Gesch. Ins. i. 15, 3. Burm. Handb. Ent. ii. 1, 68, 4, pl. 2, f. 5.

Mexico?

### 4. ASPIDIOTUS LAURI.

Aspidiotus Lauri, Bouché, Schadl. Gart. Ins. 53, 4. Nat. Gesch. Ins. i. 16, 4, pl. 1, f. 7, 8. Burm. Handb. Ent. ii. 1, 68, 3.

# 5. ASPIDIOTUS PALMARUM.

Aspidiotus Palmarum, Bouché, Nat. Gesch. Ins. i. 17, 5, pl. 1, f. 15. Burm. Handb. Ent. ii, 1, 69, 5.

# 6. ASPIDIOTUS SALICIS.

Aspidiotus Salicis, Bouché, Ent. Zeit. Stett. v. 293, 1. Coccus (Aspidiotus) Salicis, Ratz. Forst. Ins. iii. 195, 3, pl. 11, f. 7. Coccus salicis? Müll. Fn. Frid. 31, 300.

Europe.

# 7. Aspidiotus Bromeliæ.

Lecanium Bromeliæ, Bouché, Schadl. Gart. Ins. 49, 2. Nat. Gesch. Ins. 20, 2, pl. 1, f. 14. Kerner, Naturg. C. Brom. 1778. Burm. Handb. Ent. ii. 1, 70, 2.

Coccus Bromeliæ, Ruricola, Gard. Chron. ii. 1842, 1441. Aspidiotus Bromeliæ, Bouché, Ent. Zeit. Stett. v. 293, 2. Ruricola, Gard. Chron. iii. 1843, 131.

#### 8. ASPIDIOTUS PROTEUS.

Aspidiotus Proteus, Curt. Ruricola, Gard. Chron. iii. 1843, 676.

#### 9. ASPIDIOTUS CONCHIFORMIS.

Coccus conchiformis, Gmel. Ed. Syst. Nat. i. 4, 2221, 37. Stew. El. Nat. Hist. ii. 113.

Aspidiotus conchiformis, Ruricola, Gard. Chron. iii. 735.

#### 10. ASPIDIOTUS OSTREÆFORMIS.

Aspidiotus ostreæformis, Curt. Ruricola, Gard. Chron. iii. 1843, 459.

#### 11. ASPIDIOTUS LINEARIS.

Coccus arborum linearis, Modeer, Act. Gothenb. i. 22, 14. Geoff.

Ins. Par. i. 509, 17. Réaum. Ins. iv. pl. 5, f. 6, 7. Kirby
and Spence, Intr. Ent. i. 201. Fitch, The Senate, No. 30, 69.
Harris, Ins. New Engl. 201? Perley, Mass. Agric. Soc. 1796,
32.

Diaspis linearis, Costa, Faun. Regn. Nap. Gallinsetti, 21, 3. Europe.

# 12. ASPIDIOTUS CALYPTROIDES.

Diaspis Calyptroides, Costa, Faun. Regn. Nap. Gallinsetti, 20, 1. Italy.

# 13. ASPIDIOTUS OBLIQUUS.

Diaspis obliquus, Costa, Faun. Regn. Nap. Gallinsetti, 21, 2. Italy.

#### 14. ASPIDIOTUS CRYPTOGAMUS.

Coccus cryptogamus, Dalm. Act. Holm. 1825, 357, 1, pl. 3, f. 1—17. Harris, Ins. New Engl. 203.

Sweden.

#### 15. ASPIDIOTUS HORDEOLUM.

Coccus hordeolum, *Dalman*, *Act. Holm.* 1825, 365, 3, pl. 4, f. 1—5. Sweden.

### 16. Aspidiotus ——?

a. Germany. Presented by F. Walker, Esq.

#### Genus 2. LECANIUM.

Lecanium, Illiger, Burm., Ratz.

Coccus, p., Linn., Fabr., Geoff., Schæff., Réaum., Sulz., Frisch., Schrank, Gmel., Oliv., Modeer, Berk., Stew., Turt., Shaw., Haworth, Harris, Westw.

Kermes, p., Oliv. Chermes, p., Geoffr. Calymmata, Geoffr.

Calypticus, Group 1. Monaspidea; 2. Polyaspidea, Costa.

### 1. LECANIUM HESPERIDUM.

Lecanium Hesperidum, Burm. Handb. Ent ii. 1, 69, 1, pl. 1, f. 11.

Coccus Hesperidum, Linn. Syst. Nat. i. 2, 739, 1. Faun. Suec.

1015. Modeer, Act. Gothenb. i. 19, 8. Sedilean et Delahire,
Mem. Acad. Paris, 1692. Fabr. Sp. Ins. ii. 393, 1. Mant.
Ins. ii. 318, 1. Ent. Syst. iv. 224, 1. Syst. Rhyn. 306, 46, 1.
Geoff. Ins. Par. i. 505, 2. Schæff. Elem. pl. 48. Act. Paris.
1692, 14, pl. 14. Réaum. Ins. iv. pl. 1. Müll. Fn. Frid. 31,
297. Sulz. Ins. pl. 12, f. 81. Frisch. Ins. xii. pl. 12. Gmel.
Ed. Syst. Nat. i. 4, 22, 15, 1. Harris, Ins. New Engl. 199.
Schrank, Faun. Boic. ii. 1, 143, 1257. Enc. Méth. pl. 119,
f. 1—4. Berk. Syn. i. 122. Stew. El. Nat. Hist. ii. 113.
Turt. Syst. Nat. ii. 712. Shaw, Gen. Zool. vi. 190, pl. 60,
f. sup. Haworth, Ent. Trans. i. 307. Fonscol. Ann. Soc.
Ent. Fr. iii. 208, 7. Goureau, Ann. Soc. Ent. Fr. 2me Série,
11. Ruricola, Gard. Chron. iii. 459, 796.

Calypticus hesperidum, Costa, Fauna del regno di Napoli, Gallin-

setti, 8.

a—d. Presented by F. Walker, Esq. e, f. ——?

#### 2. LECANIUM PERSICÆ.

Lecanium Persicæ, Burm. Handb. Ent. ii. 1, 71, 3. Bouché, Ent.

Zeit. Stett. v. 293, 1.

Coccus Persicæ, Modeer, Act. Gothenb. i. 28, 22. Fabr. Ent. Syst. Suppl. 545, 5. Syst. Rhyn. 307, 5. Schrank, Faun. Boic. ii. 1, 144, 1262. Geoffr. Ins. Par. i. 506, 5. Réaum. Ins. iv. pl. 2, f. 4, 5. Gmel. Éd. Syst. Nat. i. 4, 2220, 31. Stew. El. Nat. Hist. ii. 113. Bingley, Anim. Biog. iii. 197. Dum. Cons. Gén. pl. 39, f. 4. Fonscol. Ann. Soc. Ent. Fr. iii. 207, 6. Bouché, Schadl. Ins. 59 — 5. Ratz. Forst. Ins. iii. 191. Goureau, Ann. Soc. Ent. Fr. 2me Série, ii.

Kermes Persicæ, Enc. Méth. Hist. Nat. Ins. pl. 119, f. 1.

Coccus Persicorum, Ræm. Gen. pl. 11, f. 9. Shaw, Gen. Zool. vi. pl. 60, f. inf.

Coccus costatus, Schrank, Ins. Aust. 589.

a—d. England.

#### 3. LECANIUM ILICIS.

Lecanium Ilicis, Burm. Handb. Ent. ii. 1, 71, 4.

Coccus Ilicis, Linn. Syst. Nat. ii. 740, 6. Modeer, Act. Gothenb. i. 24, 19. Garid. Aixens. 250, pl. 23. Geoffr. Mat. Med. ii. 782. Strobelberger, Tract. de Coc. 1620? Marsilli, Osserv. Nat. Kerm. 1711. Lederm. Micros. 72, pl. 36. Fabr. Sp. Ins. ii. 393, 5. Mant. Ins. ii. 318, 6. Ent. Syst. iv. 225, 6. Syst. Rhyn. 308, 7. Réaum. Ins. iv. pl. 5, f. 1. Brandt, v. Ratz. Med. Zool. ii. 223. Gmel. Ed. Syst. Nat. i. 4, 2216, 6. Dillon, Travels through Spain, 18—31, pl. Canals, Diss. Kerm. 1768. Bochart, Hierozoic. ii. 4, 27. Truchet, Traité compl. du Kermes, 101. Beckmann, Hist. Invent. ii. 171—205. Bancroft, Perm. Colours, i. 393. Parkhurst, Heb. Lex. Kirby and Spence, Intr. Ent. 5 ed. i. 319. Fonscol. Ann. Soc. Ent. Fr. iii. 210, 10. Westw. Loudon, Arboretum Brit. 1910.

Chermes Ilicis, Oliv. Enc. Méth. Hist. Nat. Ins.

# 4. LECANIUM QUERCUS.

Coccûs Quercus, Linn. Syst. Nat. ii. 740, 5. Faun. Suec. 1016. Fabr. Sp. Ins. ii. 393, 4. Mant. Ins. ii. 318, 5. Ent. Syst. iv. 225, 5. Syst. Rhyn. 307, 6. Gmel. Ed. Syst. Nat. i. 4, 2216, 5. Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 712. Oliv. Enc. Méth. pl. 119, f. 5—8. Réaum. Ins. iv. pl. 6, f. 1—4.

Chermes Quercûs, Geoffr. Ins. Par. i. 508, 13. Coccus Roboris? Schrank, Faun. Boic. ii. 1, 146, 2. Coccus - ? Audouin, Ann. Soc. Ent. Fr. v. Europe.

#### 5. LECANIUM CESTRI.

Coccus Cestri, Bouché, Naturg. Insect. 1.

#### 6. LECANIUM VITIS.

Coccus Vitis, Linn. Syst. Nat. ii. 241, 16. Fabr. Sp. Ins. ii. 395, 18. Mant. Ins. ii. 319, 25. Ent. Syst. iv. 227, 23. Syst. Rhyn. 310, 24. Modeer, Act. Gothenb. i. 20, 9. Geoffr. Ins. Par. i. 506, 6. Act. Bonon. ii. 279, pl. 284. Galiatius, Comment. Bonon. ii. 2, 279-283. Réaum. Ins. iv. pl. 6, f. 5-7. Schrank, Ins. Austr. 595. Faun. Boic.ii. 1,1261,144. Gmel. Ed. Syst. Nat. i. 4, 2218, 16. Haworth, Ent. Trans. i. 307. Oliv. Enc. Méth. Ins. pl. 120, f. 13—16. Harris, Ins. New. Engl. 205? Ratz. Forst. Ins. iii. 191.

Calypticus spumosus, Costa, Faun. Regn. Nap. Gallinsetti, 10, 2. Coccus of the vine, Rusticus, Ent. Mag. ii. 510.

a. Germany. Presented by F. Walker, Esq.

# 7. LECANIUM OLEÆ.

Coccus Olea, Latreille. Oliv. Enc. Meth Ins. Toulouzan et Négrel. Fonscol. Ann. Soc. Ent. Fr. iii. 206, 5, ix. 109, 6. Goureau, Ann. Soc. Ent. Fr. 2me Séric, ii. Costa, Osservazioni sugl. Insetti del Ulmo e delle Olive, Reale Istituto d' Incoraggiamento alle Scienze Naturali di Napoli, iii.

S. Europe.

# 8. LECANIUM TILIÆ.

Coccus Tiliæ, Linn. Syst. Nat. ii. 741, 11. Faun. Suec. 1021. Müll. Fn. Frid. 31, 299. Modeer, Act. Gothenb. i. 30, 25. Fabr. Sp. Ins. ii. 394, 10. Mant. Ins. ii. 319, 12. Ent. Syst. iv. 226, 14. Syst. Rhyn. 309, 15. Réaum. Ins. iv. pl. 3, f. 1-3. Geoffr. Ins. Par. i. 507, 9. Gmel. Ed. Syst. Nat. i. 4, 2217, 11. Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 713. Oliv. Enc. Méth. pl. 120, f. 9-11.

Coccus Tiliæ? (New York), Fitch, The Senate, No. 30, 69.

Europe.

#### 9. LECANIUM CORYLI.

Coccus Coryli, Linn. Syst. Nat. ii. 741, 10. Faun. Suec. 1026.

Modeer, Act. Gothenb. i. 29, 23. Réaum. Ins. iv. pl. 3, f. 4—10.

Müll. Fn. Frid. 31, 298. Geoffr. Ins. Par. i. 507, 10. Fabr.

Sp. Ins. ii. 394, 7. Mant. Ins. ii. 319, 9. Ent. Syst. iv. 225,

11. Syst. Rhyn. 308, 12. Gmel. Ed. Syst. Nat. i. 4, 2217, 10.

Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 713. Oliv.

Enc. Méth. pl. 120, f. 2—8.

Calypticus lævis, Costa, Faun. Regn. Nap. Gallinsetti, ii. 3.

Europe.

### 10. LECANIUM RORISMARINIS.

Coccus Rorismarini, Fonscol. Ann. Soc. Ent. Fr. iii. 217, 18, pl. 3, A. f. 10—12.

France.

#### 11. LECANIUM BUXI.

Coccus Buxi, Fonscol. Ann. Soc. Ent. Fr. iii. 218, 19, pl. 3, A. f. 13.

# 12. LECANIUM AONIDUM.

Coccus Aonidum, Linn. Syst. Nat. ii. 739, 2. Fabr. Sp. Ins. ii. 393, 2. Mant. Ins. ii. 318, 2. Ent. Syst. iv. 224, 2. Syst. Rhyn. 307, 2. Modeer, Act. Gothenb. i. 30. 26. Gmel. Ed. Syst. Nat. i. 4, 2215, 2.

Asia.

# 13. LECANIUM BETULÆ.

Coccus Betulæ, Linn. Syst. Nat. ii. 740, 7. Faun. Suec. 1017. Fabr. Sp. Ins. ii. 394, 8. Mant. Ins. ii. 319, 10. Ent. Syst. iv. 226, 12. Syst. Rhyn. 308, 13. Modeer, Act. Gothenb. i. 23, 16. Gmel. Ed. Syst. Nat. i. 4, 2216, 7. Berk. Syn. i. 122. Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 713.

Europe.

# 14. LECANIUM CARPINI.

Coccus Carpini, Linn. Syst. Nat. ii. 740, 8. Faun. Suec. 1018. Fabr. Sp. Ins. ii. 394, 9. Mant. Ins. ii. 319, 10. Ent. Syst.

iv. 226, 13. Syst. Rhyn. 309, 14. Modeer, Act. Gothenb. i. 29, 24. Gmel. Ed. Syst. Nat. i. 4, 2216, 8. Stew. El. Nat. Hist. ii. 113.

Coccus (Cecanium) Carpini, Ratz. Forst. Ins. iii. 194, pl. 11, f. 6. Europe.

#### 15. LECANIUM RUSCI.

Coccus Rusci, Linn. Syst. Nat. ii. 741, 12. Fabr. Sp. Ins. ii. 394, 11. Mant. Ins. ii. 319, 13. Ent. Syst. iv. 226, 15. Syst. Rhyn. 309, 16. Modeer, Act. Gothenb. i. 31, 29. Gmel. Ed. Syst. Nat. i. 4, 2217, 12. Column. Purp. 16, pl. 17. Guionann. Adv. i. 60, pl. 3, f. 27. Klein, Ostr. 116. Bocc. Mus. pl. 107, f. 23, h. h.

# S. Europe.

#### 16. LECANIUM SALICIS.

Coccus Salicis, Linn. Faun. Suec. 1022. Modeer, Act. Gothenb. i. 21, 12. Gmel. Ed. Syst. Nat. i. 4, 2218, 15. Schrank, Faun. Boic. ii. 1, 143, 1259. Stew. El. Nat. Hist. ii. 113.

Coccus Salicis, Macquart, Amyot, Ann. Soc. Ent. Fr. 2me Série, vii. 50, pl. 2, 111. Bull. Ent. 75. Toulouzon et Nègrel. Coccus Salicis? (New York), Fitch, The Senate, No. 30, 69. Europe.

# 17. LECANIUM ALNI.

Coccus Alni, Modeer, Act. Gothenb. i. 23, 17. Gmel. Ed. Syst. Nat. i. 4, 2221, 41. Schrank, Faun. Boic. ii. 1, 144, 1259. Europe.

# 18. LECANIUM RACEMOSUM.

Lecanium racemosum, Ratz. Forst. Ins. iii. 192, 1, pl. 11, f, 8. Coccus racemosus, Ratz. Ent. Zeit. Stett. iv. 204. Germany.

# 19. LECANIUM CAMBII.

Lecanium Cambii, Ratz. Forst. Ins. iii. 194, 2. Germany.

#### 20. LECANIUM UVÆ-URSI.

Coccus Uvæ-Ursi, Linn. Syst. Nat. ii. 742, 19. Fabr. Sp. Ins. ii. 394, 14. Mant. Ins. ii. 319, 17. Modeer, Act. Gothenb. i. 49, 37. Gmel. Ed. Syst. Nat. i. 4, 2219, 19. Stew. El. Nat. Hist. ii. 113. Bancroft, Perm. Colours, i. 401. Kirby and Spence, Intr. Ent. i. 321.

Coccus Arbuti? Fabr. Ent. Syst. iv. 226, 19. Syst. Rhyn. 310, 20.

Europe.

#### 21. LECANIUM CRATÆGI.

Coccus Cratægi, Linn. Syst. Nat. ii. 742, 21, 20. Fabr. Sp. Ins. ii. 395, 16. Mant. Ins. ii. 319, 19. Ent. Syst. iv. 127, 21. Syst. Rhyn. 310, 22. Modeer, Act. Gothenb. i. 20, 10. Réaum. Ins. iv. pl. 6, f. 11, 12.

Coccus Oxyacanthæ, Gmel. Ed. Syst. Nat. i. 4, 2219, 21. Stew. El. Nat. Hist. ii. 113. Oliv. Enc. Méth. Ins. Fonscol. Ann. Soc.

Ent. Fr. iii. 214, 15.

#### 22. LECANIUM BERBERIDIS.

Coccus Berberidis, Schrank, Faun. Boic. ii. 1, 146, 1270. Bavaria.

# 23. LECANIUM PICEÆ.

Coccus Piceæ, Schrank, Faun. Boic. ii. 1, 146, 1271. Bavaria.

# 24. LECANIUM ASARI.

Coccus Asari, Schrank, Faun. Boic. ii. 1, 145, 1265. Bavaria.

# 25. LECANIUM RUBI.

Coccus Rubi, Schrank, Faun. Boic. ii. 1, 144, 1260. Bavaria.

# 26. LECANIUM EPIDENDRI.

Lecanium Epidendri, Bouché, Ent. Zeit. Stett. v. 293, 5.

#### 27. LECANIUM PRENANTHIS.

Coccus Prenanthis, Schrank, Faun. Boic. ii. 1, 147, 1273. Bavaria.

#### 28. LECANIUM ACERIS.

Lecanium Aceris, Bouché, Ent. Zeit. Stett. v. 293, 4.

Coccus Aceris, Modeer, Act. Gothenb. i. 21, 13. Geoffr. Ins. Par. i. 509, 18. Fabr. Ent. Syst. iv. 225, 7. Syst. Rhyn. 308, 10. Gmel. Ed. Syst. Nat. i. 4, 2221, 38. Schrank, Faun. Boic. ii. 1, 147, 1274. Curt. Brit. Ent. 717. Westw. Intr. Ent. ii. 446.

a. —— ?

#### 29. LECANIUM AMYGDALI.

Coccus Amygdali, Schrank, Faun. Boic. ii. 1, 147, 1275. Coccus Persicæ, Schrank, Ins. Aust. 586. Germany.

# 30. LECANIUM PADI.

Lecanium Padi, Schrank, Faun. Boic. ii. 1, 145, 1267. Bavaria.

# 31. LECANIUM XYLOSTEI.

Coccus Xylostei, Schrank, Faun. Boic. ii. 1, 145, 6. Bavaria.

# 32. LECANIUM JUGLANDIS.

Lecanium Juglandis, Bouché, Ent. Zeit. Stett. v. 293, 3. Germany.

# 33. LECANIUM ULMI.

Coccus Ulmi, Linn. Syst. Nat. ii. 740, 9. Faun. Suec. 1019. Fabr. Sp. Ins. ii. 393, 6. Mant. Ins. ii. 319, 8. Ent. Syst. iv. 225,

10. Syst. Rhyn. 308, 11. Réaum. Ins. iv. 69, pl. 5, f. 5—7. Modeer, Act. Gothenb. i. 27, 21. Gmel. Ed. Syst. Nat. i. 4, 2217, 9. Geoffr. Ins. i. 507, 8. Deg. Ins. vi. 436, 1, pl. 28, f. 7. Schrank, Faun. Boic. ii. 1, 145, 1264. Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 713. Oliv. Enc. Méth. Ins. Latr. Mag. Encycl. ii. 1796. Fonscol. Ann. Soc. Ent. Fr. iii. 215, 16. De la Rue, Ent. Forest.

Europe.

#### 34. LECANIUM PYRI.

Coccus Pyri, Schrank, Faun. Boic. ii. 1, 145, 1263. Bavaria.

# 35, LECANIUM PURPURATUM.

Coccus purpuratus, *Dalm. Act. Holm.* 1825, 363, 2, pl. 3, f. 18—21. Sweden.

### 36. LECANIUM HEMICRYPHUM.

Coccus hemicryphus, Dalm. Act. Holm. 1825, 369, 6, pl. 4, f. 18—27.

Sweden.

# 37. LECANIUM GIBBERUM.

Coccus gibber, *Dalm. Act. Holm.* 1825, 366, 4, pl. 4, f. 6—12. Sweden.

# 38. LECANIUM CYPRÆOLA.

Coccus cypræola, *Dalm. Act. Holm.* 1825, 367, 5, pl. 4, f. 13—17. Sweden.

# 39. LECANIUM CORNI.

Lecanium Corni, Bouché, Ent. Zeit. Stett. v. 293, 2. Germany.

# 40. LECANIUM TESTUDO.

Coccus testudo, Curt. Ruricola, Gard. Chron. 1843, iii. 443. England.

### 41. LECANIUM PATELLÆFORMIS.

Coccus patellæformis, Curt. Ruricola, Gard. Chron. 1843, iii. 517. England.

#### 42. LECANIUM? MYRICÆ.

Coccus Myricæ, Linn. Syst. Nat. ii. 741, 13. Fabr. Mant. Ins. ii. 319, 14. Ent. Syst. iv. 226, 16. Syst. Rhyn. 309, 17. Modeer, Act. Goth. i. 31, 27. Gmel. Ed. Syst. Nat. i. 4, 31, 27.

Cape.

#### 43. LECANIUM? CAPREÆ.

Coccus Capreæ, Linn. Syst. Nat. ii. 741, 14. Fabr. Sp. Ins. ii. 394, 12. Mant. Ins. ii. 319, 15. Ent. Syst. iv. 226, 17. Syst. Rhyn. 309, 18, Modeer, Act. Goth. i. 22, 15. Deg. Ins. vi. 440, 2, pl. 28, f. 13. Gmel. Ed. Syst. Nat. i. 4, 2218, 14. Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 713. Fonscol. Ann. Soc. Ent. Fr. iii. 213, 13.

Chermes Capreæ, Oliv. Enc. Meth. Ins.

Europe.

# 44. LECANIUM? HYPERICONIS.

Coccus Hypericonis, Pallas, It. i. 21. Gmel. Ed. Syst. Nat. i. 4, 2219, 25.

Russia.

# 45. LECANIUM? PILOSELLÆ.

Coccus Pilosellæ, Linn. Syst. Nat. ii. 742, 18. Faun. Suec. 1024.

Act. Upsal. 1742, 54, 2. Fabr. Sp. Ins. ii. 394, 13. Mant. Ins.

ii. 319, 16. Ent. Syst. iv. 226, 18. Syst. Rhyn. 309, 19. Modeer,

Act. Goth. i. 49, 36. Müll. Fn. Frid. 31, 302. Sim. Paul.

Quadr. 113. Act. Upsal. 1742, 54, pl. 2. Gmel. Ed. Syst.

Nat. i. 4, 2219, 18. Stew. El. Nat. Hist. ii. 113.

Sweden.

### 46. LECANIUM? SERRATULÆ.

Coccus Serratulæ, Fabr. Sp. Ins. ii. 395, 17. Mant. Ins. ii. 319, 20. Ent. Syst. iv. 227, 22. Syst. Rhyn. 310, 23. Gmel. Ed. Syst. Nat. i. 4, 2220, 26. Stew. El. Nat. Hist. ii. 113. Turt. Syst. Nat. ii. 714.

England.

#### 47. LECANIUM? ZOSTERÆ.

Coccus Zosteræ, Fabr. Sp. Ins. ii. 395, 19. Mant. Ins. ii. 319, 22 Ent. Syst. iv. 227, 24. Syst. Rhyn. 310, 25. Gmel. Ed. Syst Nat. i. 4, 2220, 27.

Shores of the Baltic.

#### 48. LECANIUM? LIRIODENDRI.

Coccus Liriodendri, Hamburg, Mag. xii. 1, 24. Gmel. Ed. Syst. Nat. i. 4, 2220, 28.

# 49. LECANIUM? CARICÆ.

Coccus Cariex, Fabr. Ent. Syst. iv. 225, 8. Syst. Rhyn. 308, 9. Fonscol. Ann. Soc. Ent. Fr. iii. 205, 4, pl. 3, A. f. 4.

Coccus Ficus-Caricæ, Enc. Méth Ins. Bernard, Mém. Fig. Acad. Marseille, 1773, 89, pl. 1, f. 14—21.

France.

# 50. LECANIUM? DIOSMATIS.

Coccus Diosmatis, Modeer, Act. Gothenb. i. 21, 11. Gmel. Ed. Syst. Nat. i. 4, 2221, 40.

Cape.

# 51. LECANIUM? UVA.

Coccus Uva, Modeer, Act. Gothenb. i. 32, 30. Gmel. Ed. Syst. Nat. i. 4, 2222, 42.

Sweden.

PART IV.

#### 52. LECANIUM? ABIETIS.

Coccus Abietis, Modeer, Act. Gothenb. i. 27, 20. Geoff. Ins. Par. i. 507, 7. Gmel. Ed. Syst. Nat. i. 4, 2221, 32. Schrank, Beytr. zur Naturg. 485.

Coccus Arborum, Schrank, Ins. Austr. 585.

Coccus Pineti, Schrank, Faun. Boic. ii. 1, 146, 1269.

Europe.

#### 53. LECANIUM? SPURIUM.

Coccus spurius, Modeer, Act. Gothenb. i. 43, 32. Gmel. Ed. Syst. Nat. i. 4, 2222, 43.

Sweden.

#### 54. LECANIUM? ATERRIMUM.

Calypticus aterrimus, Costa, Faun. Regn. Nap. Gallinsetti, ii. 4. Naples.

# 55. LECANIUM? RADIATUM.

Calypticus radiatus, Costa, Faun. Regn. Nap. Gallinsetti, 12, 4 bis.

Naples.

# 56. LECANIUM? TESTUDINEUM.

Calypticus testudineus, Costa, Faun. Regn. Nap. Gallinsetti, 12, 5. Group 2. Polyaspidea.

Naples.

# 57. LECANIUM? FASCIATUM.

Calypticus fasciatus, Costa, Faun. Regn. Nap. Gallinsetti, 14, 6. Naples.

#### 58. LECANIUM COFFEE?

Ferrugineum, depressum, squamiforme, subrotundum, transverse sulcatum.

Ferruginous, flat, scale-like, almost round, with transverse ridges. Length of the body 1 line.

a-ff. Ceylon. Presented by Prof. Goodsir.

Destroys the Coffee Plantations in Ceylon.

#### 59. LECANIUM CAPENSE.

Piceum, transversum, conchiforme, transversè striatum.

Conchiform, pitchy, a little broader than long, with transverse striæ, which are parallel to the broader side. Breadth 1 line.

a. Algoa Bay. Above 200 specimens on bark. Presented by Dr. Pereira.

#### 60. LECANIUM AUSTRALE.

Rufum, ellipticum, transversè rugosum.

Red, elliptical, transversely rugose. Length of the body  $1\frac{1}{2}$  line.

a. Van Diemen's Land. Presented by the Rev. T. Ewing.

61.	LECANIUM	?
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a-c. ---?

# Genus 3. COCCUS.

Coccus, Linn., Fabr., Modeer, Réaum., Deg., Geoff. Schrank, Shaw, Latr., Gmel., Kirby & Spence, Burm., Bouché.

Diaprostocetus, p., Costa, olim.

Dactylopius, p., Costa, Faun. Regn. Nap. Gallinsetti, 15.

Pseudococcus, Westw. Trechorys, Curtis.

#### 1. Coccus Cacti.

Coccus Cacti, Linn. Syst. Nat. ii. 742, 22. Modeer, Act. Gothenb. i. 44, 33. Brown, Jamaica, 435. Réaum. Ins. iv. pl. 7, f. 11, Deg. Ins. vi. 447, 1, pl. 80, f. 12, 14. Act. Angl. 1762. Hernand. Mex. 78. Sloane, Jam. ii. 153. Præf. pl. 9. Petiv. Gazoph. iii. pl. 1, f. 5. Rausch, Hist. Nat. Coch. pl. 1, f. 1— 5. Fabr. Sp. Ins. ii. 395, 19. Mant. Ins. ii. 319, 24. Ent. Syst. iv. 227, 26. Syst. Rhyn. 311, 27. Gmel. Ed. Syst. Nat. i. 4, 2220, 22. Shaw, Gen. Zool. vi. 191, pl. 61. Bartram, Trav. Carol. and Florida. Richter, Tract. Phys. Coch. 1701. Melchior van Ruyscher, Nat. Hist. Coch. 1729. Breynii, Hist. Nat. Coc. 1739. Bosc. Diss. Coch. 1739. Schulze, de Gran. Ker. et Coch. Cartheuser, Verm. Stucke, &c. 1759. Anderson, Letter on Coch. Ins. 1773, 1775. Asiatic Researches, Alzale, Mem. Coch. 1795. Jameson, Edin. New Phil. Journ. iii. 3, 195. Réaum. Ins. iv. 88, pl. 7, f. 11-19. Brandt v. Ratz. Med. Zool. ii. 201, pl. 26, f. 6-12. Thiery de Menonville de la Coch., &c. 1787. Humb. Political Essay, New Spain, iii. 72, 79. Burm. Handb. Ent. ii. 1, 72, 1, pl. 2, f. 1. 'l'Herminier, Ann. Soc. Ent. Fr. vi. 507. Audouin, Ann. Soc. Ent. Fr. vi. 67, viii., x. 149. Curtis, Bot. Mag. No. 6, New Series, pl. 2742, f. 8, 11. Bancroft, Perm. Colours, i. 413. Kirby & Spence, Intr. Ent. i. 321.

a-d. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

#### 2. Coccus Adonidum.

Coccus Adonidum, Linn. Syst. Nat. i. 2, 740, 4. Faun. Suec. i. 1169. Lederm. Miscrosc. 1762, pl. 9. Fabr. Sp. Ins. ii. 393, 3. Mant. Ins. ii. 318, 4. Ent. Syst. iv. 224, 4. Syst. Rhyn. 307, 4. Geoff. Ins. Par. i. 511, 1. Modeer, Act. Gothenb. i. 48, 34. Gmel. Ed. Syst. Nat. i. 4, 2215, 4. Shaw, Gen. Zool. vi. 190. Haworth, Ent. Trans. i. 308. Bouché, Schadl. Gart. Ins. 51. Burm. Handb. Ent. ii. 1, 74, 2, pl. 2, f. 2.

Trechocorys Adonidum, Curt. Ruricola, Gard. Chron. (1843) iii.

443.

a-d. England. Presented by F. Walker, Esq.

#### 3. Coccus manniparus.

Coccus manniparus, Ehrenberg, Sym. Phys. i. pl. 10. Chavannes, Bull. Soc. Sci. Nat. Cant. Vaud. Ann. Soc. Ent. Fr. 2me Série, vi. 145, 3. Burm. Handb. Ent. ii. 1, 74, 3.

Mount Sinai.

#### 4. Coccus Fraxini.

Coccus Fraxini, Chavannes, Ann. Soc. Ent. Fr 2me Série, vi. 143. South of Europe.

#### 5. Coccus Lacca.

Coccus lacca, Kerr, Phil. Trans. 1781, 374, f. a, b. Norburg, Phil. Trans. 1791, 1792, 229. Brandt & Ratz. Med. Zool. ii. 226, pl. 26, f. 13, 14. Roxburgh, Chermes Lacca, Phil. Trans. lxxxi. Virey, Rech. Ins. Gomme-laque, Journ. Pharm. 1810. Lesser, ii. 165. Bancroft, Perm. Col. ii. 20, 49. Kirby & Spence. Intr. Ent. i. 324. Burm. Handb. Ent. ii. 1, 75, 4.

Coccus ficus, Fabr. Mant. Ins. ii. 319, 7. Ent. Syst. iv. 225, 7. Syst. Rhyn. 308, 8. Gmel. Ed. Syst. Nat. i. 4, 2218, 23.

East Indies.

# 6. Coccus Picridis.

Coccus Pieridis, Fonscol. Ann. Soc. Ent. Fr. iii. 201, 1, pl. 3, A, f. 1. Coccus hirticornis, Fonscol. Ann. Soc. Ent. Fr. iii. 203, 2, pl. 3, A. f. 2, mas.?

France.

# 7. Coccus Mamillariæ.

Coccus Mamillariæ, Bouché, Ent. Zeit. Stett. v. 293, 2. Germany.

# 8. Coccus Liliaceorum.

Coccus liliaceorum, Bouché, Ent. Zeit. Stett. v. 293, 1. Germany.

#### 9. Coccus Tuliparum.

Coccus Tuliparum, Bouché, Ent. Zeit. Stett. v. 293, 2. Germany.

### 10. Coccus Poterii.

Coccus Poterii, Raii, Hist. Plant. i. 401. Kirby & Spence, Intr. Ent. i. 320.

England.

#### 11. Coccus Alchimillæ.

Coccus Alchimillæ? Berger, de Alch. supina et Coc. 1748.

### 12. Coccus Psidii.

Coccus Psidii, Chavannes, Bull. Soc. Sci. Nat. Cant. Vaud. Ann. Soc. Ent. Fr. 2me Série, vi. 139, 1.

Brazil.

### 13. Coccus Cassiæ.

Coccus Cassiæ, Chavannes, Bull. Soc. Sci. Nat. Cant. Vaud. Ann. Soc. Ent. Fr. 2me Série, vi. 141, 2.

Brazil.

#### 14. Coccus farinosus.

Coccus farinosus, Deg. Ins. vi. 442, 3, pl. 38, f. 16, 17. Modeer, Act. Gothenb. i. 50, 38. Gmel. Ed. Syst. Nat. i. 4, 2220, 29.

Sweden.

# 15. Coccus Capensis.

Coccus capensis, Linn. Syst. Nat. ii. 740, 4. Amæn. Acad. vi. 401, 47. Fabr. Mant. Ins. ii. 318, 3. Ent. Syst. iv. 224, 3. Syst. Rhyn. 307, 3. Modeer, Act. Gothenb. i. 31, 28. Gmel. Ed. Syst. Nat. i. 4, 2215, 3.

Cape.

#### 16. Coccus variegatus.

Coccus variegatus, Geoff. Ins. Par. i. 508, 12. Réaum. Ins. iv. pl. 5, f. 3, a. Gmel. Ed. Syst. Nat. i. 4, 2221, 34. Stew. El. Nat. Hist. ii. 113. Fonscol. Ann. Soc. Ent. Fr. iii. 210, 9.

Europe.

#### 17. Coccus Mespili.

Coccus Mespili, Geoff. Ins. Par. i. 508, 16. Gmel. Ed. Syst. Nat. i. 4, 2221, 36. Stew. El. Nat. Hist. ii. 113. Oliv. Enc. Méth. Ins.

Europe.

# 18. Coccus Quercus.

Coccus Quercus, Modeer, Act. Gothenb. i. 24, 18. Geoff. Ins. Par. i. 507, 11. Réaum. Ins. iv. pl. 5, f. 2. Burm. Handb. Ent. ii. 1, 71, 5.

Coccus fuscus, Gmel. Ed. Syst. Nat. i. 4, 2221, 33. Stew. El. Nat. Hist. ii. 113. Audouin, Ann. Soc. Ent. Fr. x. 145?

Var.? Coccus lanatus, Geoff. Ins. Par. i. 508, 14. Gmel. Ed. Syst. Nat. i. 4, 2221, 35.

Eriosoma Quercûs? Sir Oswald Mosley, Gard. Chron. i. 828.

a, b. England. Presented by F. Walker, Esq.

# 19. Coccus laniger.

Coccus laniger, Geoff. Ins. Par. i. 512, 3. Réaum. Ins. iv. pl. 7, f. 1, 2, 6, 9. Gmel. Ed. Syst. Nat. i. 4, 2221, 39. Europe.

# 20. Coccus Fragariæ.

Coccus Fragariæ, S. G. Gmel. It. i. 205, 312. Phil. Trans. 1765. 91, pl. 10. Gmel. Ed. Syst. Nat. i. 4, 2219, 24. Stew. El. Nat. Hist. ii. 113, Turt. Syst. Nat. ii. 715. Coccus Potentillæ, Meyer, Act. Soc. Priv. Boh. iv. 152, 184.

Europe.

#### 21. Coccus? PHALARIDIS.

Coccus Phalaridis, Linn. Syst. Nat. ii. 742, 20. Faun. Suec. 1026. Fabr. Sp. Ins. ii. 395, 15. Mant. Ins. ii. 319, 18. Ent. Syst. iv. 226, 20. Syst. Rhyn. 310, 21. Modeer, Act. Gothenb. i. 48. 35. Gmel. Ed. Syst. Nat. i. 4, 2219, 20. Berk. Syn. i. 122. Stew. El. Nat. Hist. ii. 113. Turt. Hist. Nat. ii. 714.

Coccus graminis, Geoff. Ins. Par. i. 512,2, pl, 10, f. 15.

Coccus graminum? Oliv. Enc. Méth. pl. 120, f. 12.

Coccus Radicum graminis? Fonscol. Ann. Soc. Ent. Fr. iii. 212, 12.

Europe.

#### 22. Coccus fimbriatus.

Coccus fimbriatus, Fonscol. Ann. Soc. Ent. Fr. iii. 209, pl. 3, A. f. 7.

S. France.

### 23. Coccus festucæ.

Coccus Festucæ, Fonscol. Ann. Soc. Ent. Fr. x. 216, 17, pl. 3, A. f. 9.

# 24. Coccus? CLEMATIDIS.

Coccus clematidis. Geoff. Ins. Par. i. 506, 1. Gmel. Ed. Syst. Nat. i. 4, 2220, 30.

France.

# 25. Coccus Prunastri.

Coccus Prunastri, Fonscol. Ann. Soc. Ent. Fr. x. 211, 11. S. France.

# 26. Coccus? Thymi.

Coccus Thymi, Schrank, Faun. Boic. ii. 1, 146, 1268. Bavaria.

#### 27. Coccus crispus.

Coccus crispus, Fonscol. Ann. Soc. Ent. Fr. iii. 204, 3, pl. 3, A. f. 3.

S. France.

#### 28. Coccus Sinensis.

Picea, elliptica; dorsum lanugine alba densè vestitum; pedes ferruginei.

Pitchy, elliptical, thickly covered above with white woolly matter: feelers submoniliform, slightly setaceous; the joints successively increasing in length: legs ferruginous, hairy. Length of the body 2 lines.

a, b. China. Presented by G. T. Lay, Esq.

#### 29. Coccus tuberculatus.

Coccus tuberculatus, Bouché, Nat. Gesch. Ins. i. 18, pl. 1, f. 9—13. Germany.

#### 30. Coccus Laricis.

Coccus Laricis, Bouché, Nat. Gesch. Ins. i, 22. Germany.

#### 31. Coccus caudatus.

Mas. Gracilis,n igra, albo lanuginosa; antennæ filiformes, corpore duplo longiores; abdominis setæ longissimæ; pedes setosi; alæ cinereæ.

Male.—Black, slender, with a thick white covering: feelers filiform, bristly, about twice the length of the body: bristles of the abdomen about five times the length of the body: legs bristly: wings gray. Length of the body 3 lines; of the wings 4 lines.

a. Columbia. From Dr. Cuming's collection.

#### 32. Coccus Fagi.

Flava, elliptica, albo-farinosa.

Yellow, elliptical, covered with white powder. Length of the body 2 lines.

England.

### Genus 4. PORPHYROPHORA.

Porphyrophora, Brandt, Medic. Zool. ii. 355. Coccus, Linn., Fabr., Frisch, Modeer, Geoffr., Schrank, &c.

#### 1. Porphyrophora Polonica.

Coccus Polonicus, Linn. Syst. Nat. ii. 741, 14. Faun. Suec. 1 ed. 720, 2 ed, 1023. Fabr. Sp. Ins. ii. 395, 20. Mant. Ins. ii. 319, 23. Ent. Syst. iv. 227, 25. Syst. Rhyn. 310, 26. Müll. Fn. Frid. 31, 301. Modeer, Act. Gothenb. i. 34, 21. Geoff. Ins. Par. i. 504, 1. Breyn. Act. Acad. Nat. Cur. iii. App. 5, 32. Act. Phys. Med. 6, 3, App. 5, pl. 1. Camer. Epit. 691. Bauh. Pin. 281. Rupp. Jen. 86. Raii, Hist. 186. Bauh. Hist. iii. 378. Frisch, Ins. v. 6, pl. 2. Act. Ups. 1742, pl. 1. Réaum. Ins. iv. 1, 14. Gmel. Ed. Syst. Nat. i. 4, 2218, 17. Schrank, Faun. Boic. ii. 1, 147, 1276. Stew. El. Nat. Hist. ii. 113. Shaw, Gen. Zool. vi. 194.

Dactylopius Polonicus, Costa, Faun. Regn. Nap. Gallinsetti, 17, 2.

Poland.

# 2. Porphyrophora Hamelii.

Porphyrophora Hamelii, Brandt, Medic. Zool. ii. 355, 1. Mém. Acad. St. Petersb. Sc. Phys. iii. 2, 60, pl. 2. Porphyrophora armeniaca, Burm. Handb. Ent. ii. 1, 78, 1.

Armenia.

# Genus 5. CEROPLASTES.

Ceroplastes, Gray, Spicilegia Zoologica, 7.

# 1. CEROPLASTES CHILENSIS.

Ceroplastes chilensis, Gray, Spicilegia Zoologica, 7, pl. 3, f. 7. a-g. Chili. Presented by J. E. Gray, Esq.

#### 2. CEROPLASTES JANEIRENSIS.

Ceroplastes Janeirensis, Gray, Spicilegia Zoologica, 7, pl. 3, f. 6. a—d. Rio Janeiro. Presented by J. E. Gray, Esq.

### 3. CEROPLASTES JAMAICENSIS.

Coccus (Ceroplastes) Jamaicensis, White, Ann. Nat. Hist. xvii. 333.

a-d. Jamaica. From Mr. Gosse's collection.

#### 4. CEROPLASTES CERIFERUS.

Coccus ceriferus, Fabr. Ent. Syst. Suppl. 546, 27. Syst. Rhyn. 311, 28. Chavannes, Bull. Soc. Sci. Nat. Cant. Vaud. Ann. Soc. Ent. Fr. 2me Série, vi. 144, 1. Anderson, Monogr. Cocci Ceriferi, Madras, 1791. Pearson, Trans. Phil. 1794, 383. Ann. de Chimie, xxiii. 140. Lemaire, Bull. de Ferus. Sc. Med. Journ. Pharm. viii.?

Madras.

# 5. CEROPLASTES CEREUS.

Coccus pe-lá, Chavannes, Bull. Soc. Sci. Nat. Cant. Vaud. Ann. Soc. Ent. Fr. 2me Série, vi. 145,2. Stanislas Julien, Compterendu Acad. Sci. 1840. Rozier Mém. P. Grosier's China, i. 439. Southey's Thalaba, ii. 166. Sir G. Staunton, Emb. China, i. 400. Kirby & Spence, Intr. Ent. i. 327.

Coccus ——? Davis, China, Asiat. Rech. xiv. 182. Chavannes, Bull. Soc. Sci. Nat. Cant. Vaud. Ann. Soc. Ent. Fr. 2me

Série, vi. 145, 4.

China.

# 6. CEROPLASTES AUSTRALIÆ.

Alba, depressa, subrotunda.

White, flat, almost round. Length 2 lines. a-z. Sydney. Presented by Capt. Sir E. Home.

#### 7. CEROPLASTES ----?

a-f. Guayquil. Presented by Capt. Belcher.

#### Genus 6. MARGARODES.

Margarodes, Lansdown Guilding, Linn. Trans. xvi. 118.

#### 1. MARGARODES FORMICARUM.

Margarodes Formicarum, Lansd. Guild. Linn. Trans. xvi. 119, pl. 12. Latr. Bull. Ferussac, 1831.

West Indies.

# Genus 7. ASPISARCUS.

Aspisarcus, Newport.

### 1. Aspisarcus Eucalypti.

Aspisarcus Eucalypti, Newport.

a-c. New Holland, (300 miles from Port Philip). Presented by Dr. D. Maclagan.

# Genus 8. MONOPHLEBUS.

Monophlebus, Leach, Latr. Chironomus, p., Fabr.

# 1. Monophlebus dubius.

Chironomus dubius, Fabr. Syst. Antl. 46, 40. Monophlebus Fabricii, Westw. Arc. Ent. i. 22, 1. Sumatra.

# 2. Monophlebus atripennis.

Monophlebus atripennis, Klug, Handb. ii. 80. Westw. Arc. Ent. i. 22, 2.

a. East Indies. Presented by Capt. Parry.

b. East Indies. From Archdeacon Clerk's collection.

c. East Indies. From Mr. Sowerby's collection.

*d*—*f*. ——?

#### 3. Monophlebus Leachii.

Monophlebus Leachii, Westw. Arc. Ent. i. 22, 3, pl. 6, f. 1. Zool. Journ. ii. 20, 452.

Malabar.

#### 4. Monophlebus Burmeisteri.

Monophlebns Burmeisteri, Westw. Arc. Ent. i. 22, 4, pl. 6, f. 2. Entomologist, 146, 4.

#### 5. Monophlebus Saundersii.

Monophlebus Saundersii, Westw. Arc. Ent. i. 22, 5. Entomologist, 146, 5.

East Indies.

#### 6. Monophlebus Raddoni.

Monophlebus Raddoni, Westw. Arc. Ent. i. 22, 6, pl. 6, f. 3. Entomologist, 146, 6.

West Africa.

# 7. Monophlebus Illigeri.

Monophlegus Illigeri, Westw. Arc. Ent. i. 227, pl. 6, f. 4. Ento-mologist, 146, 7.

Van Diemen's Land.

# 8. Monophlebus fuscipennis.

Monophlebus fuscipennis, Burm. Handb. Ent. ii. 1, 80, pl. 2, f. 4, 6. Entomologist, 146, 8.

Germany.

# 9. Monophlebus Brasiliensis.

Coccineus; antennæ fuscæ; alæ nigræ, subrugosæ.

Bright red: feelers brown, red at the base, moniliform, clothed with whorls of hairs, longer than the body: wings black, finely

PART IV. 4 C

rugulose; veins bright red towards the base. Length of the body  $1\frac{1}{2}$  line; of the wings 5 lines.

a-c. Parà. From Mr. Stevens' collection.

### Genus 9. CALLIPAPPUS.

Callipappus, Guérin, Rev. Zool. 1841. Amyot et Serv. Hist. Nat. Hém. 619, 495.

#### 1. CALLIPAPPUS WESTWOODII.

Callipappus Westwoodii, Guérin, Rev. Zool. 1841. Amyot et Serv. Hist. Nat. Hém. 620, 1.

a. West Australia. From Mr. Clifton's collection.

#### Genus 10. DORTHESIA.

Dorthesia, Bosc, Journ. de Phys. 1784, 171. Latr., Léon Duf., Burm.

Aphis, Linn., Fabr., Frisch. Coccus, Dorthes, Fabr., Panz. Cionops, Leach.

# 1. DORTHESIA URTICÆ.

Aphis Urticæ, Linn. Syst. Nat. i. 2, 736, 30. Fabr. Sp. Ins. ii. 387, 29. Ent. Syst. iv. 217, 35. Frisch. Ins. viii. 34, pl. 17. Gmel. Ed. Syst. Nat. i. 4, 2208, 30. Turt. Syst. Nat. ii. 70, 6. Rossi, Faun. Etrusc. 262, 1389.

Coccus characias, Dorthes, Journ. de Phys. 1785, 207, 11, pl. 1, f. 14—16. Fabr. Syst. Rhyn. 311, 29. Oliv. Ent. vi. 99, 9. Leach, Edin. Enc. i. 126. Léon Duf. Hém. pl. 9, 102.

Coccus dubius, Fabr. Ent. Syst. iv. 228, 27. Panz. Faun. Ins. Germ. xxxv. 21.

Dorthesia characias, Bosc, Journ. Phys. 1784, 171, pl. 1, f. 2-4. Latr. Gen. iii. 175, 1. Duf. Rhyn. 110, pl. 10, f. 102—109. Kirby & Spence, Intr. Ent. iii. 183. Westw. Intr. i. pl. 1, f. 8. Blanch. Hist. Nat. Ins. 212. Amyot et Serv. Hist. Nat. Hém. 624, 1, pl. 1, f. 8. Aphis Urticata, Stew. El. Nat. Hist. ii. 110.

Dorthesia Urticæ, Burm. Handb. Ent. ii. 1, 76, 1. Orthezia, Amyot, Ann. Soc. Ent. Fr. 2me Sér. v. 489, 544.

a. Scotland. Presented by E. Doubleday, Esq. b—d. ——?

#### 2. Dorthesia floccosa.

Dorthesia floccosa, Kirby & Spence, Intr. Ent. iii. 183. Coccus floccosus, Deg. Ins. vii. 604, pl. 44, f. 26. a, b. ———?

#### 3. Dorthesia Cataphracta.

Coccus cataphractus, Shaw, Nat. Misc. v. pl. 182. Gen. Zool. vi. 194, pl. 62. Stew. El. Nat. Hist. ii. 114. Turt. Syst. Nat. ii. 714.

England.

#### 4. DORTHESIA CHITON.

Dorthesia Chiton, Zett. Faun. Lapp. i. 562, 5, 1. Lapland.

# 5. Dorthesia Americana.

Flava, elliptica, squamis albis tecta; antennis pedibusque ferrugineorufis; laminæ laterales et apicales breves.

Yellow, elliptical, enclosed in short white scales: feelers and legs reddish ferruginous. Length of the body  $1\frac{1}{2}$  line.

a. North America. Presented by the Earl of Derby.

# Genus 11. ALEYRODES.

Aleyrodes, Latr., Leach, Kirby, Hartig, Germ. Ent. Zeit. iii. 371, pl. 1, f. 30, 31. Amyot et Serv.

Phalæna-Tinea, p., Linn.

Phalæna, p., Geoff. Aleurodes, Burm.

#### 1. ALEYRODES PROLETELLA.

Phalæna-Tinea proletella, Linn. Syst. Nat. 889, 374. Réaum. Ins. ii. 302, pl. 25, f. 1—7. Geoff. Ins. ii. 172, 126. Ræm. Gen. i.

pl. 23, f. 18. Stew. El. Nat. Hist. ii. 199.

Aleyrodes Chelidonii, Latr. Gen. iii. 174, 1. Leach, Edin. Enc. ix. 126. Tign. Hist. Nat. Ins. 232, pl. 5, f. 2. Kirby & Spence, Intr. Ent. iii. 80, 261. Burm. Handb. Ent. 83, 1, pl. 1, f. 1, pl. 2, f. 7. Hart. Z., 371, pl. f. Blanch. Hist. Nat. Ins. 211. Amyot et Serv. Hist. Nat. Hém. 617.

Aleurodes, Amyot, Ann. Soc. Ent. Fr. 2me Série. v. 454, 510.

Swarms on the Celandine till near the end of November. When wingless it is yellow, bordered with whitish yellow, and usually surrounded with white cottony matter: the eyes are dark red. The eggs are spindle-shaped, yellow, and shining.

a. England. Presented by F. Walker, Esq.

#### 2. Aleyrodes Brassicæ.

Aleyrodes Brassicæ, Foerster, MSS.

Perhaps a variety of A. Chelidonii. It differs from A. Fragariæ in having two spots instead of one on each wing, and its pupa is more round, and of a bright yellow colour, whereas that of A. Fragariæ is pale green. On the Cabbage, during nearly the whole year.

a-d. England. Presented by F. Walker, Esq.

# 3. ALEYRODES FRAGARIÆ.

Appears in myriads on the Strawberry, in the beginning of July, sometimes covering the whole underside of each leaf. The young larvæ stand upright, or on one end, beneath the leaves.

a-d. England. Presented by F. Walker, Esq.

# 4. ALEYRODES LONICERÆ.

On Lonicera Periclymenum. Yellow: head and thorax gray: the fore-wings white, with a dark spot on each. Pupa white, pale yellow beneath, and on the disk above.

a, b. England. Presented by F. Walker, Esq.

The Aleyrodes of the oak, the chestnut, the walnut, the ash, the sycamore, the hazel, the currant, the bramble, Lythrum Salicaria, &c., probably belong to one or other of the preceding species, and in the pupa state may be mistaken for Lecanium.

#### 5. ALEYRODES PHILLYRE E.

Aleyrodes Phillyreæ, Haliday, Ent. Mag. ii. 119.

Feeds on Phillyrea, and on different species of Cratægus, Mespilus, and Pyrus. The pupa is green, with a broad brown stripe on the disk; the fly is yellow, with white wings. It is the prey of Agromyza ornata, of a Scymnus, and of a Coccophagus. The male (?) is smaller than the female, and has a brighter yellow chest.

a-z. England. Presented by F. Walker, Esq.

#### 6. ALEYRODES CORNI.

Aleurodes Corni, Haldeman, Amer. Journ. Sci. and Art, 2nd Series, ix. No. 25, 1850, 109.

United States.

#### 7. ALEYRODES ABUTILONEA.

Aleurodes Abutilonea, Haldeman, Amer. Journ. Sci. and Art, 2nd Series, ix. No. 25, 1850, 108.

United States.

# 8. ALEYRODES Cocois.

Aleyrodes Cocois, Curtis, Ruricola, Gard. Chron. (1846) vi. 284. Barbadoes.

# Order III. PHYSAPODA.

(COMPILED FROM MR. HALIDAY'S MSS.)

Physapoda, Dum. Zool. Anal. 269. Haliday. Thysanoptera, Haliday, Ent. Mag. iii. 439. Dermaptera—Orthoptera, p., DeLaporte. Thripsites, Newman. Thrypsinæ, Blanch. Malacoptera, Brullé. Physopoda, Burm., Amyot et Serv.

Os inferum—scilicet—haustellum (coriaceum aut fere membranaceum) maxillis latis adpressis, mandibulis setaceis in lingua curva basi dilatata inclusis, (connexis siphona bivalvem fingentibus): palpis 4: tarsi biarticulati, apice vesiculosi, exungues: alæ 4 subæquales (explicatæ, lineares, ciliatæ, parce venosæ, haud raro abbreviatæ aut deficientes, et maxime in maribus): antennæ pauciarticulatæ: [prothorax mediocris, dissitus].

Victus e succis plantarum.

Rachis nodis coarctatis subquaternis (et chorda simplici?): Salivaria folliculiformia? receptaculis bis geminis conformibus? ductibus filiformibus: intestinum corpore sesquiplo seu duplo longius, flexuosum; proventriculo membranaceo, cæcis nullis: intestina tenue perbreve: vasa hepatica 4, seorsum inserta in verticillo, apice libera. Mas: testes unicapsulares, folliculiformes. Fæm. ovaria digitata thecis 4 multilocularibus: tracheæ tubulosæ tantum.

Metamorphosis incompleta, per duas ætates intermedias progrediens, scilicet:—

Propupa et pupa, asitophaga, tardigrada. Larva oculorum lenticulis paucis dissitis. T

Cerebra fœminis	Fam. 1. TUBULIFERA.
ocelli	
tres, anticus distanstres, æquidistantes (aut obsoleti)	Gen. 1. IDOLOTHRIPS.
quadrivalvis acuta:incurva	Fam. 2. TEREBRANTIA.
antennæ apice	
capillaceæstylatæ: abdomen	
tomentosumsubnudum	" 4. Sericothrips. " 5. Thrips.
antennæ apicula connata	Sub-gen. 1. APTINOTHRIPS.
discreta; prothorax apice valde angustatus	2 CHIDOTHEIDS
parum attenuatus:	" o. Ohiroidaips.
abdomen dorso efoveolatum	" 2. Limothrips.
seriatim foveolatum apicula pro ratione	
articuli 6ti brevis	" 4. Thrips.
elongata	,, 5. BELOTHRIPS. Tr. 2. COLEOPTRATA.
articulis 9 discretis	Gen. 6. MELANTHRIPS.
articulis 5 citra apiculam : alæ completæ	Sub-gen. 1. Coleothrips.
alarum rudimenta tantum	" 2. ÆLEOTHRIPS.

# Fam. I. TUBULIFERA.

Tubulifera, Haliday, Ent. Mag. iii. 441. Burm., Amyot et Serv.

Abdomen segmento ultimo tubuloso in mare et fam.: terebra fam. nulla: coxa distantes, subglobosa, subexerta: ala avenia fere et membranacea, undique longe ciliata, cruciato-incumbentes: (mandibula recurva, longius exerenda): antenna 8-articulata. Ambulant lente, nec saltitant.

Palpi maxillares 2-articulati, articulo 1mo perbrevi, labiales 6-articulati: femora antica basi sinu trochanterem cohibentia. *Mares* segmento ventrali penultimo apice convexiore distinguendi. Intestinum corpore fere sesquiplo longius: proventriculus pyriformis ab

ingluvie incisura profunda discretus, a duodeno alvei tenuis ore distans: intestinum tenue diametro vix longius: adeps in corpore acinis sanguineis conglomeratis plus minus commixtus: vasa hepatica obscure rufescentia. *Mas*: vesiculis tenuibus binis paribus, totidem imparibus.

Ovum subcylindricum rectum.

Larva antennis 7-articulatis, maxillis parallelis, mandibulis prælongis.

Propupa antennis divaricatis obtusis.

Pupa antennis ad latera capitis reflexis et adglutinatis.

Obs.—Quæ de structura interna et metamorphosi supra allata sunt a Phlæothripibus ducta sunt, utraque de altero genere incognita.

#### Genus 1. IDOLOTHRIPS.

Idolothrips, Hal. MSS.

Ocellus anterior remotus ab basi antennarum: haustellum basim prosterni attingens: palpi labiales papilliformes: alæ anticæ vena unica obsoletiore dimidiata, aut abbreviata. [Caput longissimum teres: abdomen excavatum].

Antennæ graciles, thoracis latitudinem triplo aut quadruplo superantes: palpi labiales papilliformes: prothorax inæqualis tuberculatus: metatarsi inermes. Statura procera, ut in hac familia; trilinearis et ultra.

A. Abdomen segmentis posterioribus tam longitudinis quam latitudinis ratione decrescentibus, lateribus fere muticum.

# 1. IDOLOTHRIPS MARGINATA.

Nigra: abdominis maculis lateralibus thoracisque punctis sanguineis: antennis albidis, articulis apice, interioribus et extremis totis, nigris: pedibus pallide ferrugineis fusco-cingulatis, femoribus anticis nigris, vel basi plaga sanguinea.

New Holland.

AA. Abdomen longissimum, segmentis penultimis oblongis, lateribus denticulatum, tubulo basi gibbulo et muricato.

Obs.—Discrimen fore sexus suspicor, ideoque nos pro masculis, prioris sectionis pro fæminis, accipio, haud absque dubio. Variantur utroque colore perparum.

#### 2. IDOLOTHRIPS SPECTRUM.

Abdominis lateribus valide 7-dentatis, denticulis spinâ, 3tio et 4to seta tantum, terminatis; segmento penultimo gibbere apicali bispinoso: maxima quam vidi in hoc genere, ideoque inter *Physapoda* facile princeps. Long. 4 lin. et ultra.

New Holland.

#### 3. IDOLOTHRIPS LACERTINA.

Abdominis lateribus subtilius denticulatis, denticulis intermediis pluribus muticis, segmento penultimo apice biseto. Præcedente fere duplo minor. Long. 3 lin.

New Holland.

#### Genus 2. PHLŒOTHRIPS.

Phlæothrips, Hal. Ent. Mag. iii. 441. Burm. Thrips, Deg., Fabr., Geoff., Dufour. Phlæothrips, Hoplothrips, et Haplothrips, Amyot et Serv.

Ocelli tres æquidistantes, in alatis saltem: haustellum inter coxas anticas subdeflexum: palpi labiales ovati: alæ anticæ vena unica nonnisi inchoata (vel abbreviatæ aut nullæ). [Caput oblongum depressum: abdomen depressum].

Antennæ thoracis latitudinem haud multum superantes: palpi labiales subovati: prothorax foveolatus: abdomen lateribus muticum: pedes breves; femora antica plerumque valde incrassata et metatarsus denticulo instructus.

Degunt in floribus aliæ, aliæ sub arborum cortice gregariæ.

#### A. Alæ et ocelli desunt.

#### APTERÆ.

Obs.—An alatæ inter has quoque obviæ sint nescio: conferenda Phl. pedicularia, No. 2.

#### 1. PHLŒOTHRIPS TRISTIS.

Nigra nitida, antennarum articulo 3tio albido, metatarso mutico. Long. 1 lin.

A A. Rudimenta alarum adsunt et ocelli, at nonnunquam utraque deficiunt, [tarsi antici dentati et femora valde incrassata, in mare vero præsertim]: alatæ tamen obviæ sunt numero pauciores, et fæminæ omnes, spes coloniæ.

#### HETEROPTERÆ.

#### 2. Phlæothrips pedicularia.

Phlæothrips pedicularia, Hal. Ent. Mag. iii. 441, 1. Phlæothrips flavipes, Hal. Ent. Mag. iii. 442, 4. Burm. Handb. Ent. ii. 408, 4.

Hoplothrips flavipes, Amyot et Serv. Hist. Nat. Hém. 640, 3.

Fusco-castanea, capite abdominis apice antennarum articulis plerisque basi pedibusque ferrugineis; ocellis et alis obsoletis, oculis exiguis. Mas perbrevis, femoribus anticis latioribus capite, denticulo metatarsi crasso conico, fam. denticulo tenuiore. Tum fam. fusco-picea, abdominis apice antennarum articulis intermediis basi pedibusque nisi basi ferrugineis, alis completis aut abbreviatis. Long. fam. 1 lin., mar.  $\frac{3}{4}$  lin.

Larva roseo-incarnata.

Hab. Sub cortice Sorbi Aucupariæ.

#### 3. PHLEOTHRIPS ULMI.

Thrips Ulmi, Fabr. Sp. Ins. ii. 396, 3. Mant. Ins. ii. 320, 3. Ent. Syst. iv. 229, 3. Syst. Rhyn. 313, 5. Gmel. Ed. Syst. Nat. i. 4, 2223, 6.

Thrips, &c., Geoff. Ins. Par. i. 384, 1, pl. 7, f. 6. Thrips corticis, Deg. Ins. iii. 11, 3, pl. 1, f. 8—13.

Phlæothrips Úlmi, *Hal. Ent. Mag.* iii. 441, 3, iv. 145. *Burm. Handb. Ent.* ii. 409, 3.

Hoplothrips corticis, Amyot et Serv. Hist. Nat. Hém. 640,2.

Subaptera, nigro-picea pectore dilutius piceo, antennarum articulo 3tio toto sequentibus basi pallide flavis, tibiis basi et apice anticis totis tarsisque ferrugineis,  $\mathcal{F}, \mathcal{P}$ . Tum f e m. alata, alis anticis extus lævissime flavicantibus.

Larva depressa alba, capite antennis prothoracis maculâ bilobâ et abdominis apice nigris.

Hab. Sub cortice arborum exsiccato, presertim Ulmi, gregaria.

Long. fæm.  $1\frac{1}{2}$  lin., mar. 1 lin.

a. England. Presented by F. Walker, Esq.

#### 4. PHLEOTHRIPS PINI.

Phlæothrips Pini, Hal. Ent. Mag. iv. 145. Thrips aptera, Duf. Ann. Sci. Nat. 1839, xi. 322.

Subaptera, nigro-picea pectore dilutius piceo, antennarum articulo 30 toto, sequentibus basi pallide flavis, tibiis basi apiceque anticis totis tarsisque ferrugineis,  $\delta$ ,  $\varphi$ . Tum fem. alata, alis extrorsum infumatis.

Larva elongata, incarnata, abdominis apice et antennis dilutius

nigricantibus.

Hab. Sub cortice arborum emortuarum, et præcipue Pini syl-

vestris, gregaria. Long. fæm. 12 lin.

Præcedenti simillima, modò longior: alata læviore opere dignoscenda.

### A A A. Alatæ in utroque sexu.

#### MACROPTERÆ.

a. Metatarsus anticus indentatus in mare et fæm.

#### 5. PHLEOTHRIPS STATICES.

Phleothrips statices, Hal. Ent. Mag. iii. 443, 5. Burm. Handb. Ent. ii. 409, 5.

Hoplothrips statices, Amyot et Serv. Hist. Nat. Hém. 640, 4.

Nigra, antennarum articulo 3tio et tarsis anticis cum apice tibiæ fusco-piceis, alis fusco ciliatis. Mas: pedibus anticis prevalidis metatarsi denticulo conspicuo. Fam. denticulo minutissimo. Long. fam. vix 1 lin. mar.  $1\frac{3}{4}$  lin.

Larva sanguinea, capite antennis abdomine postice et pedibus

nigricantibus.

Hab. In capitulis Armeriæ maritimæ frequens, etiam in corymbis Chrysanthemi leucanthemi. Forsan itaque Thrips leucanthemi et brachiata, Schranck, eadem sp. fæm. et mas.

### a a. Metatarsus anticus muticus (in fœminis?).

#### 6. PHLEOTHRIPS SUBTILISSIMA.

Nigra, antennarum flagello nisi apice tarsisque pallide ferrugineis, tibiis anticis nisi basi ferrugineis, alis subhyalinis; fæm.?

Hab. Sub cortice, sat agilis; in gallis Quercûs, F. W.

Præcedenti æqualis satis distincta. Caput antice magis rotundato-attenuatum, postice tantum subtilissime transversim aciculatum, inter oculos lævissimum: antennæ medio haud crassiores: alæ dimidio interiore lævius flavicante ciliis vix fuscis nisi cum congesta visantur. Tubus analis paulo brevior videtur. Long.  $\frac{2}{3} - \frac{3}{4}$  lin.

a. England. Presented by F. Walker, Esq.

#### 7. PHLEOTHRIPS ALBIPENNIS.

Phlæothrips albipennis, Burm. Handb. Ent. ii. 410, 6. Phlæothrips aculeata, Hal. Ent. Mag. iii. 441, 2. Haplothrips albipennis, Amyot et Serv. Hist. Nat. Hém. 640, 1.

Nigra, antennarum articulis 3tio et 4to totis 2do et 5to basi tibiis apice anticis totis tarsisque pallidis, corporis setis fuscis, femoribus subæqualibus; fem. Long. fem. 1½ lin.

"Hab. In floribus Valerianæ dioicæ frequens," Burm. l. c.

\* Alatæ de quibus hæreo annon referendæ forent ad Heteropterarum sectionem.

#### 8. PHLŒOTHRIPS CORIACEA.

Phlæothrips coriacea, Hal. Ent. Mag. iii. 443, 6. Burm. Handb. Ent. ii. 410, 7. Amyot et Serv. Hist. Nat. Hém. 640, 1.

Piceo-nigra, antennarum articulo 3tio toto sequentibus basi pallidis, tibiis basi apiceque anticis totis tarsisque ferrugineis, capite intricatim ruguloso, pone oculos parum rotundato-dilatato et muricato, femoribus anticis incrassatis, denticulo metatarsi manifesto; f em. Long.  $1\frac{1}{3}$  lin.

#### 9. PHLEOTHRIPS ANNULICORNIS.

Phlæothrips annulicornis, Hal. Ent. Mag. iii. 443, 7. Burm. Handb. Ent. ii. 410, 8. Amyot et Serv. Hist. Nat. Hém. 640, 2.

Piceo-nigra; antennarum articulis intermediis basi tibiis anticis tarsisque ferrugineis; capite transversim aciculato, ponè oculos parum dilatato; femoribus anticis incrassatis, denticulo metatarsi manifesto, fæm.? Long. 1 lin.

#### Fam. 2. TEREBRANTIA.

Terebrantia, Hal. Ent. Mag. iii. 443. Burm., Amyot et Serv.

Terebra fœminis compressa acuta quadrivalvis, in rima ventrali segmentorum penultimi et ultimi recondita: alæ anticæ firmiores; venis, præter ambitum, duabus parallelis elongatis, et axillari brevi obliqua, juxtapositæ suturâ rectâ: mandibulæ labium vix superantes: saltant abdomine repercusso.

Antennæ pro typo 9-articulatæ at multiformes: palpi maxillares 3-articulati: terebræ valvulæ exteriores margine supero, interiores infero, denticulato: junctura femorum cum coxis simplex, rectilinearis: coxæ posticæ approximatæ; anticæ exsertæ, subcylindricæ, obliquæ conniventes (nisi in Heliothripe).

#### Tribe 1. STENOPTERA.

Stenoptera, Burm. Handb. Ent. ii. Amyot et Serv. Stenelytra, Hal. Ent. Mag. iii. 443.

Antennæ articulis 6 discretis et apicula attenuata (plerumque biarticulata): hemelytra vix coriacea, conjunctim abdomine angustiora, subacuta undique ciliata, venis transversis nullis: terebra fem. decurva.

Antennæ apicula nonnunquam articulis indiscretis, varius altero adjecto, aut apicula cum articulo 6to connata: palpi teretes subrecti, articulis subæqualibus, segmenta quæ terebram recipiunt hujus ambitum servant.

#### Genus 3. HELIOTHRIPS.

Heliothrips, Hal. Ent. Mag. iii. 443, 1. Burm., Amyot et Serv. Thrips, Bouché.

Antennæ apice capillaceæ: coxæ anticæ distantes subglobosæ: hemelytra nisi basi valde attenuata: vena anteriore costam ante medium appetente: corporis pagina supina concinne reticulata.

Antennæ apicula elongata setacea 3-articulata: colli junctura incisa.

#### 1. HELIOTHRIPS HÆMORRHOIDALIS.

Heliothrips hæmorrhoidalis, Burm. Handb. Ent. ii. 412. Amyot et Serv. Hist. Nat. Hém. 641. Hal.

Thrips hæmorrhoidalis, Bouché, Schadl. Garten Ins. 42.
Heliothrips Adonidum, Hal. Ent. Mag. iii. 443.

Fusca, abdominis apice ferrugineo; antennis albidis basi fuscis, apice nigris; pedibus albidis. Long.  $\frac{2}{3}$ — $\frac{3}{4}$  lin.

Hab. In vaporariis Europæ, sub foliis Malvacearum, &c.; exitiosa hospitatur.

a-d. England. Presented by F. Walker, Esq.

#### Genus 4. SERICOTHRIPS.

Sericothrips, Hal. Ent. Mag. iii. 444. Burm., Amyot et Serv.

Antennæ apicula brevi: hemelytra vena utraque fere in apicem excurrente; (vel sæpius alarum rudimenta tantum): abdomen tomentosum, segmento extremo in utroque sexu conico-attenuato.

Thorax et caput opaca quasi carbonacea: alæ (posticæ) tenuissimæ, lobo axillari dilatato. Mas lacinia obtusa subapice abdominis parum prominula distingui potest: intestinum tenue basi in utriculum pro recipiendis vasis hepaticis ampliatum: quoad cætera differt non multum a structura Thripis.

#### 1. SERICOTHRIPS STAPHYLINUS.

Sericothrips staphylinus, Hal. Ent. Mag. iii. 444. Burm. Handb. Ent. 413. Amyot et Serv. Hist. Nat. Hém. 641.

Subaptera, Mas et Fxm. abdominis dorso subtilissime seriatim ciliato.

Nigra; capite thoraceque opacis, scutello albomicante, abdomine sericeo; antennæ articulo 2ndo et 3tio pedesque pallide ferruginei, femoribus basi fuscis; alarum rudimenta alba, radice nigricante. Long. ½ lin.

Hab. In floribus Ulicis, agillime cursitans et saltitans.

Fæminæ perfecte alatæ, hemelytris nigricantibus basi albidis, abdomine vix ciliato, occurrunt rarius cum subapteris commixtæ; ut in pluribus speciebus e genere *Phlæothripe*.

a-d. England. Presented by F. Walker, Esq.

#### Genus 5. THRIPS.

Thrips, Hal. Ent. Mag. iii. 444, iv. Burm.

Thrips, p., Linn., Fabr., Deg., Müll., Geoffr., Schrank, Gmel., Shaw, Latr., Kirby.

Thrips, Physapus, et Odontothrips, Amyot et Serv.

Abdomen læviusculum, subglabrum aut seriatim foveolatum, et ciliatum: abdominis segmentum extremum & brevius et obtusius quam \( \varphi \): hemelytra alis parum latiores, vena utraque in apicem fere excurrente, vel alæ abbreviatæ aut nullæ.

Intestinum corpore fere duplo longius folliculis et stricturis non tam enunciatis: proventriculus ab alveo vix discretus: intestinum tenue diametro multiplo longior. Mas vesiculis geminis tantum, brevioribus, strictis: ovum læviter curvatum (phaseoliforme): larva antennis 4-articulatis citra apiculam biarticulatam: propupa antennis porrectis divaricatis: pupa antennis supra verticem reflexis parallelis.

Antennæ apicula	Subgenus.	
connatadiscreta: Prothorax antice	1.	APTINOTHRIPS.
valde angustatus parum angustatus:	3.	CHIROTHRIPS.
Abdomen dorso		
efoveolatum seriatim foveolatum :	2.	LIMOTHRIPS.
Antennæ apicula p li 6ti	ro ratione articu-	
	4. 5.	

# Subgenus 1. APTINOTHRIPS.

Aptinothrips, Hal. Ent. Mag. iii. 445.

Antennæ articulo 6to longiore apice attenuato-exannulato: ocelli nulli: corpus lineare glabrum, abdominis dorso efoveolato: alarum ne minimo quidem vestigio.

#### 1. APTINOTHRIPS RUFA.

Thrips Apt. rufa, Hal. Ent. Mag. iii. 446, 4.
Thrips rufa, (Gleichen, Neuestes im Reich der Pflanz. pl. 16, f. 6, 7).
Gmel. Ed. Syst. Nat. i. 4, 2224, 10.

Ferruginea, oculis et rostri apice fuscis fem.: pallide flava, abdomine glandulis geminis croceis perlucentibus, segmento penultimo ante apicem medium bispinoso mas. Long. fem.  $\frac{3}{4}$ — $\frac{3}{4}$  lin.

Hab. In gramine et cerealibus.

a. England. Presented by F. Walker, Esq.

"My brief description of Aptinothrips rufa, induced Burmeister to set it down as a larva without doubt: but rashly, for the exarticulate apex of the antennæ is no indication of this state, as he seems to infer. It is a perfect insect with compound eyes, smooth coriaceous integuments, connected segments of pterothorax and prominent

humeral angles and a perfect ovipositor. For the greater certainty I took pains to trace its history, and have reared it from the larva, which I have figured, as well as the propupa and pupa. For a long time, indeed, I sought the other sex in vain, and was almost induced to fancy that like *Cynips*, the insect might be unisexual. But remembering that at some seasons females only occur of *Limothrips*, I did not give up the search, and guided by that indication I at last, at the season of hay-harvest, discovered the male, though excessively rare, I may say not a single one to several hundreds of the female. Amyot has gone farther, for while he follows Burmeister in this, he treats as a larva *Phlæothrips pedicularia* also, the development of which Burmeister had recognized."—*Haliday*, *MSS*.

#### 2. APTINOTHRIPS NITIDULA.

Thrips Apt. nitidula, Hal. Ent. Mag. iii. 446, 5.

Fusco-ferruginea, abdominis incisuris fuscis. Long.  $\frac{1}{2}$  lin. Hab. In plantis maritimis (Plantagine maritima?)

a. England. Presented by F. Walker, Esq.

#### Subgenus 2. LIMOTHRIPS.

Limothrips, Hal. Ent. Mag. iii. 444. Burm., Amyot et Serv.

Antenna apicula discreta brevi biarticulata: prothorax apice parum attenuatus: abdomen dorso efoveolatum, segmento fæm. extremo biglumi: ocelli 3: frons inter oculos impressa: mares apteri (an semper?), abdominis lateribus appendiculatis ante apicem.

#### 1. LIMOTHRIPS CEREALIUM.

Thrips L. cerealium, Hal. Ent. Mag. iii. 445, 3. Burm. Handb. Ent. ii. 414, 4.

Thrips physapus, Kirby, Linn. Trans. iii. 242. Vassali-Eandi, Mém. Acad. Turin. xvi. lxxvi.

Limothrips physapus, Amyot et Serv. Hist. Nat. Hém. 642.

Long.  $fam. \frac{3}{4}$  lin. et ultra,  $mar. \frac{1}{2} - \frac{2}{3}$  lin.

a-d. England. Presented by F. Walker, Esq.

#### 2. LIMOTHRIPS DENTICORNIS.

Thrips L. denticornis, Hal. Ent. Mag. iii. 445, 2. Limothrips denticornis, Burm. Handb. Ent. ii. 414, 3. Amyot et Serv. Hist. Nat. Hém. 642, 1.

Antennarum articulo 3tio trigono acuminato; nigra, antennarum medio, tibiis anticis, dempta basi, tarsisque fusco pallidis; hemelytris fuscis basi pallescentibus; abdominis apice 6-spinoso:  $f \alpha m$ . Long.  $\frac{3}{4}$ —1 lin.

#### Subgenus 3. CHIROTHRIPS.

Chirothrips, Hal. Ent. Mag. iii. 444. Burm., Amyot et Serv.

Antennæ articulo 2ndo acuminato, apicula brevi biarticulata: ocelli 3: caput parvum: prothorax magnus antice valde attenuatus: pedes antici præcrassi.

Alæ abdomen superantes.

#### 1. CHIROTHRIPS MANICATA.

Thrips C. manicata, Hal. Ent. Mag. iii. 444.

Chirothrips manicata, Burm. Handb. Ent. ii. 413, 1. Amyot et Serv. Hist. Hém. 642, 1.

Chirothrips longipennis, Burm. Handb. Ent. ii. 413, 2. Amyot et Serv. Hist. Nat. Hém. 642, 2.

Picea, antennarum medio tarsisque fusco pallidis, hemelytris fuscis (antennarum articulo 2ndo dilatato acuminato). Long.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.

#### Subgenus 4. THRIPS.

Thrips, Hal. Ent. Mag. iii. 446. Burm. Amyot et Serv.

Antennæ apicula discreta brevi biarticulata, rarius articulo adjecto sæpe utroque indiscreto: ocelli 3: prothorax antrorsum parum attenuatus: abdomen seriatim foveolatum nonnunquam et verticillato-ciliatum, segmento extremo mutico.

Thorax	Sectiones.	
glaber pilis perpaucis aspersus; tibiæ anticæ	1.	GYMNOPTERÆ.
apice intus dentatæ	7.	BRACHYDERI.
abortivæ evolutæ ; tum <i>maribus</i>	6.	MICROPTERÆ.
nullæabortivæ		
evolutæ		

#### Section 1. GYMNOPTERÆ.

Prothorax omnino glaber: antennæ apicula 3-articulata: hemelytra venis glabris.

#### 1. THRIPS OBSCURA.

Thrips obscura, Müll. Zool. Dan. Prodr. 1084. Hal. Ent. Magii. 447, 8.
Physapus obscurus, Amyot et Serv. Hist. Nat. Hém. 643, 1.

Pallide ferruginea subcinerascens; antennarum apice, incisura occipitis, oculisque fuscis: alis fusco-ciliatis.  $Fam. \log_{2} \frac{2}{3} \ln$ .

Variatur alis abbreviatis.

Hab. In Cerealibus. Mas nondum inventus.

a-e. England. Presented by F. Walker, Esq.

#### Section 2. EUDACTYLI.

Odontothrips, Amyot et Serv. Hist. Nat. Hém. 642, 8.

Alæ evolutæ: tibiæ anticæ apice interno denticulis 2. (Antennæ apicula bi-articulata).

#### 2. THRIPS ULICIS.

Thrips Ulicis, Hal. Ent. Mag. iii. 446, 6. Odontothrips Ulicis, Amyot et Serv. Hist. Nat. Hém. 643, 1.

Nigra, hemelytris nigricantibus basi albidis, antennarum articulo 3tio tibiis anticis tarsisque pallidis, tibiæ denticulis fuscis. Long.  $\frac{3}{4}$ —1 lin.

Hab. In floribus Ulicis, frequens. Larva ibidem.a—d. England. Presented by F. Walker, Esq.

#### 3. THRIPS LOTI.

Nigra, hemelytris nigricantibus basi albidis, antennis medio tarsisque pallidis, tibiis anticis pallidis intus fusco marginatis.

 $\it Hab.$  In floribus  $\it Loti~corniculati~lecta~rarissime,~an~incola~proprius?$ 

#### 4. THRIPS PHALERATA.

Thrips phalerata, Hal. Ent. Mag. iii. 447, 7. Burm. Handb. Ent. ii. 414, 6.

Odontothrips phalerata, Amyot et Serv. Hist. Nat. Hém. 643, 2.

Nigra, hemelytris nigricantibus fascia pallida et basi albida; antennarum articulo 3tio tarsisque pallidis, tibiis anticis pallidis fusco marginatis.

Hab. In floribus Viciæ sativæ frequens. Larva ibidem lecta.

Obs. Species alia hemelytris fasciatis in floribus Sarothamni Scoparii obvia est.

#### Section 3. HOMOPTERÆ.

Tæniothrips, Amyot et Serv. Hist. Nat. Hém. 644, 11.

Alæ evolutæ in mare et fæm. : tibiæ muticæ. Ob multitudinem specierum ulterias dispertiendæ, at sectiones nondum rite digestæ.

#### 5. THRIPS PRIMULE.

Thrips Primulæ, Hal. Ent. Mag, iii. 449, 22. Burm. Handb. Ent. ii. 415.

Tæniothrips Primulæ, Amyot et Serv. Hist. Nat. Hém. 644.

Fusca, incisuris et metathorace lutescentibus, pedibus ferruginosis, antennis medio pallidis; hemelytris breviusculis, stramineis, fascia apiceque fuscis, basi albida (vena anteriore vix nisi basi ciliata); occipite tumido; oculis protuberantibus. Mas et Fam. Long.  $\frac{3}{4}$  lin.

Hab. In floribus Primulæ veris frequens. a—d. England. Presented by F. Walker, Esq.

Obs. Species alia oculis protuberantibus in floribus Orchidis obvia est.

#### 6. THRIPS DECORA.

Thrips decora, Hal. Ent. Mag. iii. 449, 23. Burm. Handb. Ent. ii. 416, 11.

Tæniothrips decora, Amyot et Serv. Hist. Nat. Hém. 644, 2.

Nigra, hemelytris fuscis fascia pallida, basi albidis, antennis medio, tibiis apice anticis fere totis tarsisque albidis; capite æquilato,  $f \infty m$ .

Hab. In Spiræa Ulmaria et alibi rarius.

#### 7. THRIPS ASPERA.

Nigra, hemelytris nigricantibus basi albidis, pedibus fuscis femorum anticorum et tibiarum basi tibiis anticis tarsisque et antennarum medio pallidis; abdominis segmento antepenultimo basi utrinque mucronato, mas.

Semel tantum lecta.

#### 8. THRIPS ATRATA.

Thrips atrata, Hal. Ent. Mag. iii, 447, 10. Physapus atratus, Amyot et Serv. Hist. Nat. Hém. 643, 3. Atra, hemelytris nigricantibus basi albidis, antennarum articulo 3tio tarsisque fuscis. Long.  $\frac{3}{4}$  lin.

Hab. In floribus Spergulæ nodosæ et alibi frequens.

#### 9. THRIPS VULGATISSIMA.

Thrips vulgatissima, Hal. Ent. Mag. iii. 447, 11. Burm. Handb. Ent. ii. 414.

Physapus ater, Deg. Act. Holm, 1744, 3, pl. 4, f. 4. Amyot et Serv. Hist. Nat. Hém. 643, 4.

Thrips physapus, Deg. Ins. iii. 6, 1, pl. 1, f. 1. Shaw, Zool. vi. 199, pl. 63.

Nigricans, hemelytris albidis, antennis pedibusque fuscis, antennarum articulo 2ndo apice, 3tio toto, femoribus tibiisque basi et apice tarsisque pallidis, fam.

Fusco-testacea, abdomine citra basin nigricante, antennis pedibusque pallidis, antennis apice femoribus tibiisque medio infuscatis, mas.

Hab. Passim, frequens in Umbelliferis, Siliculosis, &c. a—f. England. Presented by F. Walker, Esq.

#### 10. THRIPS CYNORRHODI.

Thrips cynorrhodi, Hal. Ent. Mag. iii. 448, 12. Physapus cynorrhodi, Amyot et Serv. Hist. Nat. Hém. 643, 5.

Hab. In floribus Rosarum trivialium; præcedenti similis, minor.

#### 11. THRIPS GROSSULARIÆ.

Thrips grossulariæ, Hal. Ent. Mag. iii. 448, 13. Amyot et Serv. Hist. Nat. Hém. 644, 1.

Hab. In floribus Ribis Grossulariæ.

a-d. England. Presented by F. Walker, Esq.

#### 12. THRIPS ULMIFOLIORUM.

Thrips ulmifoliorum, Hal. Ent. Mag. iii. 447, 9. Physapus ulmifoliorum, Amyot et Serv. Hist. Nat. Hém. 643, 2.

Ferruginea, albido micans, prothoracis disco et abdomine obscurioribus, antennis fuscescentibus basi pallidis. Fam. Long.  $\frac{1}{2}$  lin.

Hab. Sub foliis Ulmi campestris in Horto Botanico ad Glasnevin prope Eblanam.

Obs. In sequentibus Spp. 17-22, antennarum apicula exarticulata videtur.

#### 13. THRIPS PHYSAPUS.

Thrips physapus, Linn. Syst. Nat. ii. 743, 2. Faun. Suec. 1027. Geoffr. Ins. Par. i. 485, 2. Scop. Ent. Carn. 418. Fabr. Sp. Ins. ii. 396, 1. Mant. Ins. ii. 320, 1. Ent. Syst. iv. 228, 1. Syst. Rhyn. 313, 3. Schæff. Elem. pl. 127. Gmel. Ed. Syst. Nat. i. 4, 2222, 2. Hal. Ent. Mag. iii. 448, 14. Burm. Handb. Ent. ii. 415, 8. Amyot et Serv. Hist. Nat. Hém. 644, 2.

Nigra, hemelytris fuscanis; antennis albidis basi apiceque fuscis; tibiis apice, anticis nisi margine, tarsisque ferrugineis; oculis glabris. Long.  $fam. \frac{2}{3} - \frac{3}{4}$  lin.

Hab. In flosculis Cichoracearum.

#### 14. THRIPS FUSCIPENNIS.

Thrips fuscipennis, Hal. Ent. Mag. iii. 448, 15. Amyot et Serv. Hist. Nat. Hém. 644, 3.

Fusca vel fusco-testacea, abdomine citra basin obscuriore, antennis basi tibiis apice tarsisque pallidioribus, hemelytris fuscanis basi albida.

Oculis glabris, fæm.

(Mas minor, pallidior, abdominis incisuris fuscis, hemelytris pallidis?)

Hab. In gramine pascuorum Julio mense frequens, in Rumice, §c.

#### 15. THRIPS DISCOLOR.

Thrips discolor, Hal. Ent. Mag. iii. 449, 20. Amyot et Serv. Hist. Nat. Hém. 644, 8.

Fusco-ferruginea, abdomine obscuro, antennis medio pedibusque flavescentibus, ocellis rubris, hemelytris albidis, fæm.

Flavo-ferruginea, oculis antennarum apice et abdominis incisuris fuscescentibus, mas.

Hab. In floribus Cruciferarum in Horto Botanico ad Glasnevin prope Eblanam.

#### 16. THRIPS CORYMBIFERARUM.

Thrips corymbiferarum, Hal. Ent. Mag. iii. 449, 18. Amyot et Serv. Hist. Nat. Hém. 644, 6.

Ferruginea, abdominis incisuris et antennarum apice obscuris, ocellis rubris, hemelytris albidis, fam.

Silacea, mas.

Hab. In floribus Corymbiferarum in horto prædicto.

#### 17. THRIPS MINUTISSIMA.

Thrips minutissima, Linn. Syst. Nat. ii. 743, 3. Faun. Suec. 1028. Fabr. Sp. Ins. ii. 396, 4. Mant. Ins. ii. 320, 4. Ent. Syst. iv. 229, 6. Syst. Rhyn. 314, 8. Gmel. Ed. Syst. Nat. i. 4, 2222, 3. Hal. Ent. Mag. iii. 449, 19. Amyot et Serv. Hist. Nat. Hém. 644, 7.

Ferruginosa, abdomine obscuriore, antennis basi pedibusque pallidioribus, ocellis decoloribus, hemelytris albidis, fam. Long.  $\frac{1}{2}$  lin.

Hab. In Cerealibus, in Reseda odorata et alibi non infrequens.

Obs. A reliquis parvulis pallidulis statim distinguenda ob ocellos inconspicuos.

#### 18. THRIPS URTICE.

Thrips Urticæ, Fabr. Sp. Ins. ii. 397, 5. Mant. Ins. ii. 320, 5. Ent. Syst. iv. 229, 4, Syst. Rhyn. 313, 6. Schrank, Beytr. zur Nat. 31, pl. 1, f. 25, 26. Gmel. Ed. Syst. Nat. i. 4, 2223, 7. Hal. Ent. Mag. iii. 448, 17. Burm. Handb. Ent. ii. 415, 9. Amyot et. Serv. Hist. Nat. Hém. 644, 5.

Flava, thorace luteo, oculis et siphone orali nigris, antennis apice fuscescentibus, ocellis rubris, hemelytris albidis, fæm.

Pallidè flava, abdominis glandulis geminis croceis perlucentibus, mas.

Hab. Passim, frequens præsertim in floribus luteis, e. gr., Nasturtio, Thalictro, Eschscholtzia, Chrysanthemo, Ranunculo, &c. a—f. England. Presented by F. Walker, Esq.

#### Section 4. NEOGAMI.

Alæ anticæ evolutæ, maribus rudimenta: antennæ apicula quasi exarticulata.

#### 19. THRIPS DISPAR.

Thrips dispar, Hal. Ent. Mag. iii. 449, 24. Curt. Brit. Ent. 748. Burm. Handb. Ent. ii. 416, 12.

Thrips brevicornis, Hal. Ent. Mag. iii. 449, 25. Burm. Handb. Ent. ii. 416.

Tæniothrips dispar, Amyot et Serv. Hist. Nat. Hém. 644, 3. Tæniothrips brevicornis, Amyot et Serv. Hist. Nat. Hém. 644, 4.

Nigra, nitida, antennis medio tibiis dempta basi tarsisque albidis, his puncto apicali obscuro, hemelytris breviusculis fuscanis fascia pallida et basi albidis, fam.

Nigro-fusca, antennis albidis basi apiceque fuscis, pedibus albidis, coxis nigricantibus, femoribus anticis basi reliquis fere totis infuscatis, alarum rudimentis albis, mas.

Hab. In spicis graminum locis humentibus.

Obs.—Alæ fæminis evolutæ equidem sed abdominis apicem non semper attingunt. Long.  $fæm. \frac{2}{3}$  lin.

PART IV.

#### Section 5. HETEROGYNÆ.

Mares apteri, ocellis nullis: fæminæ alatæ: antennæ apicula biarticulata. Vasa hepatica rufescentia quod in hoc familia fere singulare.

#### 20. THRIPS ERICE.

Thrips Ericæ, Hal. Ent. Mag. iii. 448, 15. Amyot et Serv. Hist. Nat. Hém. 644, 4.

Nigra, abdomine piceo, hemelytris fuscanis et fusco ciliatis, tibiis tarsisque ferruginosis, illis margine his puncto apicali fuscis,  $f \alpha m$ .—aut crocea antennis basi dempta oculisque fuscis, abdominis glandulis rufis perlucentibus segmento penultimo biglumi, mas. Long.  $\frac{2}{3}$  lin.

Var. fæm. piceo-rufa (immaturæ).

Obs.— Etiam in varietate antennæ nigro-fuscæ, et inde corpore obscuriores sunt.

Hab. In floribus Erica Tetralix in montosis. Larva simul lecta pinguis lutea.

#### Section 6. MICROPTERÆ.

Tmetothrips, Amyot et Serv. Hist. Nat. Hém. 645, 12.

Alarum tantum rudimenta fthorace breviora, fam.: abdomen subdepressum subtilissime verticillatum: ocelli nulli.

#### 21. THRIPS SUBAPTERA.

Thrips subaptera, Hal. Ent. Mag. iii. 450, 26. Burm. Handb. Ent. ii. 416, 14.

Tmetothrips subaptera, Amyot et Serv. Hist. Nat. Hém. 645, 1.

Nigra, antennis dempta basi et apice tibiis pro parte tarsisque obscure ferrugineis, alarum rudimentis subfuscis, fam. Long.  $\frac{1}{2}$   $\frac{2}{3}$  lin.

Hab. In Plantagine maritima?

#### 22. THRIPS PALLENS.

Thrips pallens, Hal. Ent. Mag. iii. 450, 27. Burm. Handb. Ent. ii. 416, 15.

Timetothrips pallens, Amyot et Serv. Hist. Nat. Hém. 645, 2.

Pallidè ferruginea, abdomine fusco, antennis basi et apice fuscis,  $f \alpha m$ .

#### Section 7. BRACHYDERI.

Alæ plane nullæ: thorax brevissimus: abdomen convexum verticillato ciliatum: ocelli nulli,  $f \alpha m$ .

#### 23. THRIPS TUNICATA.

Ferruginea, abdomine nisi apice nigro, fæm.

Var. Sæpius pedibus posticis nonnumquam et thorace postice piceis. Long.  $\frac{2}{3}$  lin.

Obs.—Alatam semel vidisse opinor: antennæ fere totæ et oculi fusci.

Hab. In Galio Mollugine florente. Mas nondum obvius.

Obs.—Statura accedit aliquantum ad Coleoptrata.

#### Sub-genus 5. BELOTHRIPS.

Belothrips, Hal. Ent. Mag. iii. 450. Burm., Amyot et Serv.

Antennæ apicula breviarticulata articulo 6to longior: segmentum extremum abdominis in fæminis elongatum acuminatum: tibiæ anticæ dilatatæ fornicatæ.

#### 1. BELOTHRIPS ACUMINATA.

Thrips B., acuminata, Hal. Ent. Mag. iii. 450, 28. Belothrips acuminata, Burm. Handb. Ent. ii. 416, 16. Amyot et Serv. Hist. Nat. Hém. 645.

Nigra, tibiis tarsisque fusco-ferrugineis antennis fuscis.

Hab. In floribus Rosæ spinossissmæ at non ubique.

#### Tribe 2. COLEOPTRATA.

Coleoptrata, Hal. Ent. Mag. iii. 450. Burm., Amyot et Serv.

Antennæ difformes 9-articulatæ: hemelytra abdominis latitudine, obtusa, coriacea, postice ciliata; venis nonnullis transversis: terebra  $f \alpha m$ . recurva.

Antennæ articulis	Gen.	
9 omnibus discretis	1. MELANTHRIPS	
5 et apicula attenuata	2. ÆOLOTHRIPS.	

#### Genus 6. MELANTHRIPS.

Melanthrips, Hal. Ent. Mag. iii. 450. Melanothrips, Burm. Handb. Ent. ii. 417. Amyot et Serv.

Antennæ distincte 9-articulatæ: haustellum breve: palpi maxillares articulis subequalibus: hemelytra margine costali pubescente, venis transversis 3. [Tibiæ anticæ apice dentatæ: terebra a basi parum recurva].

Larva antennis gracilibus 7-articulatis.

#### 1. MELANTHRIPS OBESA.

Melanthrips obesa, Hal. Ent. Mag. iii. 450, 1. Melanothrips, Burm. Handb. Ent. ii. 417. Amyot et Serv. Hist. Nat. Hém. 645.

Atra, hemelytris nigricantibus. Long. 3/4 lin.

Hab. In floribus Resedæ et Ranunculi.

#### Genus 7. ÆOLOTHRIPS.

Æolothrips, Hal. Ent. Mag. iii. 451. Burm., Amyot et Serv.

Antennæ articulis 5 interioribus majoribus discretis tum quatuor reliquis minutissimis in apiculum attenuatum cum 5 to fere confusam compactis: haustellum longiusculum teres: palpi maxillares sat longi geniculati articulo apicali brevissimo. [Oculi versus os producti: tibiæ anticæ inermes. Fæminæ abdominis apice subreflexa terebra recurva].

		ib- $g$ .	
Alm.	completæabortivæ	1.	COLEOTHRIPS.
Alæ lab	abortive	2.	EOLOTHRIPS.

#### Sub-genus 1. COLEOTHRIPS.

Coleothrips, Hal. Ent. Mag. iii. 451. Burm., Amyot et Serv.

Corpus convexiusculum: pterothorax latus subquadratus: Alæ completæ, hemelytra margine costali glabro, venis transversis 4. Mas. abdominis lateribus appendiculatis.

Larva antennis fere conformibus.

#### 1. COLEOTHRIPS FASCIATA.

Thrips fasciata, Linn. Syst. Nat. ii. 743, 5. Faun. Suec. 1030.
Deg. Ins. iii. 18, 4. Geoff. Ins. Par. i. 385, 3. Sulz. Ins. pl.
7, f. 48, b. Fabr. Sp. Ins. ii. 397, 6. Mant. Ins. ii. 320, 6. Ent. Syst. iv. 229, 5. Syst. Rhyn. 314, 7.
Eolothrips C. fasciata, Hal. Ent. Mag. iii. 451, 1.
Eolothrips fasciata, Burm. Handb. Ent. ii. 417, 1.

Nigra, hemelytrorum basi fascia et apice albis: antennis basi albidis abdominis basi et apice et pedibus piceis, f e m. Nigro-fusca, abdominis basi subrufæ, antennis basi albidis, pedibus piceo pallidis, mas. Long. f e m.  $\frac{3}{4} - \frac{2}{3}$  lin.

Coleothrips fasciata, Amyot et Serv, Hist. Nat. Hém. 646, 1.

a, b. England. Presented by F. Walker, Esq.

#### 2. COLEOTHRIPS MELALEUCA.

Nigra, hemelytrorum basi macula costæ mediæ et apice albis, antennarum articulo 3tio elongata albido, fæm. Long. 1 lin.

#### 3. COLEOTHRIPS VITTATA.

Æolothrips C. vittata, Hal. Ent. Mag. iii. 451, 2. Æolothrips vittata, Burm. Handb. Ent. ii. 418, 2. Coleothrips vittata, Amyot et Serv. Hist. Nat. Hém. 646, 2.

Nigra, hemelytrorum basi et costæ dimidio exteriore albis; antennis medio albidis,  $f \alpha m$ . Long.  $\frac{3}{4}$  lin.

### Sub-genus 2. ÆOLOTHRIPS.

Eolothrips, Hal. Ent. Mag. iii. 451. Burm., Amyot et Serv.

Corpus teres: pterothorax constrictus: alarum nonnisi rudimenta.

#### 1. ÆOLOTHRIPS ALBICINCTA.

Eolothrips albicineta, Hal. Ent. Mag. iii. 451, 3. Burm. Handb. Ent. ii. 418, 3. Amyot et Serv. Hist. Nat. Hém. 646.

Atra, abdominis apice ferrugineo, antennis versus basin et abdominis cingulo antico albis, fam. Long. 1 lin.

a. England. Presented by F. Walker, Esq.

# SUPPLEMENT.

Page 21.

For 3us subundatus read 4us subundatus.

Page 23.

O30. PLATYPLEURA INTERNA.

Nervus transversus 1us fere rectus, obliquus, angulum valde obtusu fingens, 20 plus quadruplo ejus longitudine divisus; 2us fer rectus, valde obliquus, angulum perobtusum fingens, 10 duplo longior; 3us vix undatus, obliquus, angulum acutum fingens; 4us arcuatus, subobliquus, angulum acutum fingens, 3i longitudine.

This species most resembles P. semilucida; and the two, like P. gemina, P. basifolia, P. punctigera, P. brevis, and P. simplex, have the sides of the fore-chest somewhat dilated and angular, and are near allied to Oxypleura, which genus is also connected with Platypleura by means of O. clara, and joins Zammara through O. Polydorus.

Second marginal areolet shorter than the first; first cross-vein almost straight, slanting, forming a very obtuse angle, parted from the second by more than four times its length; second almost straight, very slanting, forming an extremely obtuse angle, twice the length of the first; third hardly waved, slanting, forming an acute angle; fourth curved outward, slightly oblique, forming an acute angle, as long as the third; fifth much curved outward, upright, forming an almost right angle. Body green, tawny here and there: head much narrower than the fore-chest, adorned above

with an irregular black band, which includes four spots; cavity of face black, and with black transverse furrows on each side: mouth yellow with a black tip, reaching beyond the hind-hips: eyes hardly prominent: fore-chest with five black stripes, the middle one widened behind, longer than the other four; hind scutcheon widened but hardly angular on each side: scutcheon of middle chest with four black marks, the outer pair long-obconical, their tips almost joining a black band, which sends forth a dart-shaped black stripe between the inner marks, the latter are short-obconical; hind border slightly excavated: abdomen black, a little longer than the chest: legs slightly marked with black: fore-wings adorned with gilded down, brown, with some tawny spots for more than half the length from the base, with two short, oblique, irregular, connected brown bands, and with a row of connected brown spots along the hind border: a colourless spot on the front areolet: veins green, tawny towards the tips: hind-wings tawny, brown wards the tips, which with the hind border are colourless. Length the body 9 lines; of the wings 31 lines.

North India. From the East India Company's collection.

Page 47.

2. DUNDUBIA OBTECTA.

i. Java. From the East India Company's collection.

74. DUNDUBIA VAGINATA.

f, g. Java. From the East India Company's collection.

Page 48.

7. DUNDUBIA VARIANS.

a. Silhet. From the Rev. J. Stainforth's collection.

This may be the male of D. chlorogaster.

© 8. DUNDUBIA LINEARIS.

a, b. ---?

Var? Forewings not tinged with green; first cross-vein but slightly curved; second rather short and upright; fourth shorter than usual and not angular.

c. Silhet. From the Rev. J. Stainforth's collection.

#### Page . 90.

# 21. FIDICINA IMMACULATA.

a. North Bengal. From Miss Campbell's collection.

## Page 94.

C 26. FIDICINA TIBICEN. Male

This species is very variable in the colour and markings of the chest, and in the clouding and mutual distance of the first and second cross-veins.

# Page 98.

## 31. FIDICINA INTERNATA.

b. New Holland. Presented by the Haslar Hospital.

#### Page 101.

# 35. FIDICINA BICOLOR.

Nervus transversus lus subundatus, perobliquus, angulum vix fingens, 20 ferè quadruplo ejus longitudine divisus; 2us vix undatus, perobliquus, angulum vix fingens, 10 multo brevior; 3us fere rectus, vix obliquus, angulum rectum fingens; 4us undatus, obliquus, angulum vix acutum fingens.

Second marginal areolet a little longer than the first; first cross-vein slightly waved, extremely oblique, hardly forming an angle, parted from the second by almost four times its length; second hardly waved, extremely oblique, hardly forming an angle, much shorter than the first; third almost straight, hardly oblique, forming a right angle; fourth waved, oblique, forming a hardly acute angle, longer than the third; fifth curved outward, upright, forming a hardly (acute angle. Body pitchy black, ferruginous beneath: head a little broader than the fore-chest; face slightly convex, not prominent: mouth reaching a little beyond the middle hips: sides of the fore-chest slightly concave in the middle, slightly convex in front, slightly concave behind: abdomen with a

black stripe beneath: drums irregularly triangular, extending a little beyond half the abdomen, concave on the inner side and conical towards the tips, which are slightly rounded: fore-thighs armed with two long, sharp teeth: wings slightly gray, dark brown along the fore border and about the first and second cross-veins; veins black, pitchy towards the base. Length of the body 16 lines; of the wings 56 lines.

a. Java. From the East India Company's collection.

# Page 102-232.

#### O Genus 12. CICADA.

Nearly all the species which are mentioned in this catalogue may be divided into the following groups.

Of large size, with broad heads, prominent eyes, and with the chest slightly dilated and angular on each side.

Body linear, somewhat quadrate: head broad: eyes prominent: sides of the fore-chest somewhat rounded: hind-scutcheon broad.

#### Group 3. (Sp. 16).

Body linear: head broad: eyes rather prominent: sides of the fore-chest almost linear.

Group 4. (Sp. 18, 20, 97, 104, 105, 112—141, 144—146, 151, 152, 155, 156, 166.)

Body more or less spindle-shaped: head small, much narrower than the chest: eyes not prominent: sides of the fore-chest concave in the middle, convex in front and behind.

#### Group 5. (Sp. 19).

Head a little narrower than the chest: hind-scutcheon narrow, forming a distinct angle on each side.

#### Group 6. (Sp. 21).

Head very little narrower than the chest, almost triangular, slightly produced in front, whose sides are almost straight; sides of the fore-chest convex in the middle.

Group 7. (Sp. 57, 82, 87, 90, 93—95).

Body generally short: head almost as broad as the chest: eyes more or less prominent: sides of the hind scutcheon rounded or slightly angular by the base of each fore-wing.

Group 8. (Sp. 83—86, 91, 92, 96, 98—101, 106, 142, 143, 147, 150, 157—160, 162, 163, 167, 185, 189—194).

Body rather narrow: head a little narrower than the chest: eyes not prominent: fore-chest almost linear excepting the hind-scutcheon, which is widened and rounded by the base of each fore-wing.

### Group 9. (Sp. 102, 103).

Body rather narrow: head as broad as the chest: eyes prominent: sides of the fore-chest almost linear: hind-chest widened and rounded by the base of each fore-wing.

Group 10. (Sp. 109-111, 153, 161, 165).

Like Group 8, but more slender and of small size: eyes more prominent.

Group 11. (Sp. 154, 164).

Head very small.

#### Page 113.

# O 16. CICADA FRAXINI.

Cicada Fraxini, Germ. Thon. Arch. ii. 2, 4, 46. Herr.-Schaff. Faun. cxliv. 1. Siebold, Ent. Zeit. Stett. viii. 16, 6.

#### Page 120.

# 53. CICADA VIRIDICOLLIS? Fœm.

Cicada viridicollis? Germ. Silb. Rev. Ent. ii. 62, 17.

Nervus transversus 1us valdė arcuatus, obliquus, angulum obtusum fingens, 2o ejus longitudine divisus; 2us subcurvus, obliquus, angulum acutum fingens, 1o multo brevior; 3us subundatus, obliquus, angulum vix acutum fingens; 4us vix undatus, obliquus, angulum vix acutum fingens, 3i longitudine.

Second marginal areolet about one-fourth shorter than the first; first cross-vein much curved outward along the lower half, slanting, forming a slightly obtuse angle, parted from the second by its own length; second very slightly curved, slanting, forming an acute angle, shorter than the first; third slightly curved, oblique, forming a hardly acute angle; fourth almost straight, oblique, forming a hardly acute angle, as long as the third; fifth much curved outward, almost upright, forming a hardly acute angle. Testaceous, clothed with short pale hairs: head a little narrower than the fore-chest; face rather prominent, short-conical: eyes not prominent: mouth reaching the hind-hips: chest grass-green, with a tawny tinge: sides of the fore-chest almost straight; hind-scutcheon hardly widened on each side: hind-border of the middle-chest hardly concave: abdomen almost obconical, compressed and pointed at the tip, much longer than the chest: legs green: wings colourless; fore border and veins green, darker towards the tip. Length of the body 12 lines; of the wings 32 lines.

a. ----?

#### Page 125.

C62. CICADA PASSERCULUS.

b. Ega, on the Amazon. From Mr. Stevens' collection.

#### Page 126.

O 64. CICADA SPINICOSTA.

d. Ega, on the Amazon. From Mr. Stevens' collection.

#### Page 151.

# 89. CICADA URENS.

The name of this species is changed to distinguish it from C. torrida, *Erichson*.

#### Page 159.

#### O 97. CICADA ZEALANDICA.

Var. Second marginal areolet a little longer than the first; first cross-vein almost straight, very slanting, hardly forming an angle, parted from the second by about twice its length; second almost straight, very slanting, hardly forming an angle, a little shorter than the first; third almost straight, slanting, forming a very acute angle; fourth almost straight, slightly oblique, forming a hardly acute angle, a little longer than the third; fifth very slightly curved, oblique, forming an obtuse angle. Body luteous, varied with green: head with a short, broad, irregular black band on the crown; face with a black stripe, which is forked towards the crown; epistoma with two black stripes: fore-chest with eight black stripes; the middle pair united behind, and sending forth a short branch along the furrow on each side; the second pair almost U-shaped; the third pair slanting and united to the outermost, which extend along the sides of the hind-scutcheon; the latter is concave on each side; middle-chest with four obconical black stripes, the inner pair short and compact, the outer pair long, curved, and much intersected; some black marks near the hind border, which is slightly concave: abdomen with black bands; underside mostly black at the base, at the tip, and along each side: thighs striped with black; middleshanks and hind-feet with black bands; fore-shanks black, tawny at the base; anterior feet black: wings colourless; veins black, bright red towards the base; first and second cross-veins and the longitudinal vein between them clouded with dark brown.

b. New Zealand. From Mr. Stevens's collection.

#### Page 160.

O 99. CICADA ALBIDA.

d. Ega, Amazon River. From Mr. Stevens' collection.

4 F

# O101. CICADA ORNI.

Cicada Orni, Ratz. Forst. Ins. iii. pl. 11, f. 1, F. Siebold, Ent. Zeit. Stett. viii. 13, 3.

#### Page 173.

# C119. CICADA CIRCUMDATA.

U Tettigonia marginata, Leach.

The name of this species is altered to distinguish it from C. marginata, Olivier.

f-h. New Holland.

#### Page 226.

#### 182. CICADA HÆMATODES.

Cicada hæmatodes, Schæff. Icon. Ins. Ratisb. pl. 121, f. 1, 2. Roes. Ins. ii. Locust, pl. 25, f. 3. Stoll, Cic. pl. -, f. 133. Siebold, Ent. Zeit. Stett. viii. 8, 1. Fischer, Ent. Zeit. Stett. viii.

OTettigonia tibialis, Panz. Faun. Ins. Germ. lix. 5.

O Dele Cicada sanguinea, Germ.

## Page 227.

#### 9185. CICADA ANNULATA.

a. Isle of Paros. Presented by Prof. E. Forbes.

# Page 228.

Nervus transversus 1us rectus, ferè erectus, angulum vix obtusum fingens, 20 plus triplo ejus longitudine divisus; 2us ferè rectus, subobliquus, angulum obtusum fingens, 10 paullo longiori; 3us ferè rectus, obliquus, angulum rectum fingens; 4us rectus, obliquus, angulum vix acutum fingens, 30 brevior; 5us subcurvus, erectus, angulum ferè rectum fingens.

Cicada limitata, Germar.

Nearly allied to C. signifera, and one of the group which is distinguished by the shortness of the first and second marginal areolets: second marginal areolets about as long as the first: first cross-vein straight, almost upright, forming a hardly obtuse angle, parted from the second by more than thrice its length; second indistinctly curved outward, slightly oblique, forming an obtuse angle, a little longer than the first; third almost straight, oblique, forming a right angle; fourth straight, oblique, forming a hardly acute angle, shorter than the third; fifth hardly curved outwards, almost upright, forming a right angle.

a. Cape. From M. Dregé's collection.

### Page 229..

# 204. CICADA ÆSTUANS.

Cicada æstuans, Lucas, Explorat. Scient. Alger. Atlas, pl. 4, f. 6. Algiers.

# Page 230.

# 207. CICADA CONCINNA.

Cicada concinna, Germ. Mag. Ent. iv. 98, 10. Faun. Ins. Eur. xiii. 17. Siebold, Ent. Zeit. Stett. viii. 9, 2.

O Cicada Orni? Sulz. Ins. pl. 10, f. 65. Tettigonia hæmatodes? Füssly, Schw. Ins. 452.

Germany, Dalmatia, Podolia.

# 209. CICADA ALGIRA.

Cicada Algira, Lucas, Explorat. Scient. Alger. Atlas, pl. 4, f. 5. Algiers.

#### Page 231.

#### 217. CICADA OBSCURA.

Cicada obscura, Germ. Thon. Arch. ii. 2, 4, 49. Siebold, Ent. Zeit. Stett. viii. 16, 5.

Germany.

1 32 24

# 223. CICADA CANTANS.

Cicada cantans, Lucas, Explorat. Scient. Alger. Atlas, Hém. pl. 4, f. 4.

Algiers.

#### Page 232.

#### C225. CICADA SANGUINEA.

Cicada, &c., Rösel, Ins. ii. Locust, pl. 25, f. 3. Tettigonia sanguinea, Fabr. Syst. Rhyn. 39, 31.

Cicada hæmatodes, Scop. Ent. Carn. 118, 447.

Tettigonia hæmatodes, Panz. Faun. Ins. Germ. 4, 21.

Cicada sanguinea, Germ. Silb. Rev. Ent. ii. 58, 5. Siebold, Ent. Zeit. Stett. viii. 15, 4.

Cicada helvola, Germ. Mag. Ent. iv. 99, 12. Thon, Arch. 4, 48.

Cicada plebeia, Germ. Thon. Arch. 4, 47.

a-d. South of France. e-f. Tuscany.

# 226. CICADA TORRIDA.

Cicada torrida, Erichs. Arch. 1842, i. 286. Van Diemen's Land.

#### O227. CICADA PRUINOSA.

Cicada pruinosa, Say, Journ. Acad. Nat. Sci. Philad. iv. 330, 1, (1825).

United States.

#### 228. CICADA MARGINALIS.

Cicada marginata, Say, Journ. Acad. Nat. Sci. Philad. iv. 330, 2, (1825).

Missouri.

The name of this species is altered to distinguish it from C. marginata, Olivier.

# 229. CICADA DORSATA.

Cicada dorsata, Say, Journ. Acad. Nat. Sci. Philad. iv. 330, 3. Missouri.

#### 230. CICADA AURIFERA.

Cicada aurifera, Say, Journ. Acad. Nat. Sci. Philad. iv. 332, 4. Missouri.

#### 231. CICADA PARVULA.

Cicada parvula, Say, Journ. Acad. Nat. Sci. Philad. iv. 333, 5. Missouri; Rocky Mountains.

# 232. CICADA SYNODICA.

Cicada synodica, Say, Journ. Acad. Nat. Sci. Philad. iv. 334, 6. Rocky Mountains.

#### 233. CICADA HIEROGLYPHICA.

Cicada hieroglyphica, Say, Journ. Acad. Nat. Sci. Philad. vi. 235, 1.

Pennsylvania, New Jersey.

#### 234. CICADA RIMOSA.

Cicada rimosa, Say, Journ. Acad. Nat. Sci. Philad. vi. 235, 2. Missouri; Arkansaw.

#### O 235. CICADA VITRIPENNIS.

Cicada vitripennis, Say, Journ. Acad. Nat. Sci. Philad. vi. 236, 3. Arkansaw.

# 236. CICADA NIGROVIRIDIS, Fem.

Nervus transversus 1us ferè rectus, valdè obliquus, angulum perobtusum fingens, 20 triplo ejus longitudine divisus; 2us ferè rectus valdè obliquus, angulum perobtusum fingens, 10 multo brevior; 3us rectus, erectus, angulum subobtusum fingens; 4us rectus, obliquus, angulum vix acutum fingens, 3i longitudine.

Second marginal areolet a little shorter than the first; first cross-vein almost straight, very oblique, forming an extremely obtuse angle, parted from the second by thrice its length; second almost straight, very oblique, forming an extremely obtuse angle, much shorter than the first; third straight, erect, forming a slightly obtuse angle; fourth straight, oblique, forming a hardly acute angle, as long as the third; fifth straight, slightly oblique, forming an almost right angle. One of the short-winged species: body black, clothed with white hairs; borders of the segments mostly green: head a little narrower than the chest; a green spot on the front, which is convex, not prominent: mouth green with a black tip, reaching the hind-hips: eyes not prominent: sides of the fore-chest straight; hind-scutcheon mostly green, widened and rounded on each side, where it extends much beyond the anterior part: hindborder of middle-chest convex: abdomen longer than the chest, compressed at the tip: legs green, marked with black; feet black; wings colourless; veins tawny, black at the base and at the tip; fore-border green, brown towards the tip. Length of the body 9 lines; of the wings 18 lines.

a, b. South Africa. Presented by Dr. A. Smith.

# 237. CICADA INTACTA, Fem.

Nervus transversus lus subcurvus, subobliquus, angulum obtusum fingens, 20 quadruplo ejus longitudine divisus; 2us rectus, ferè erectus, angulum obtusum fingens, 10 multo brevior; 3us rectus, obliquus, angulum acutum fingens; 4us subcurvus, obliquus, angulum subacutum fingens, 30 longior.

#### Allied to C. nitida, Deg.

Second marginal areolet about two-thirds of the length of the first; first cross-vein slightly curved outward, slightly oblique, form-

ing an obtuse angle, parted from the second by about four times its length; second straight, almost upright, forming an obtuse angle, much shorter than the first; third straight, oblique, forming an acute angle; fourth slightly curved inward, oblique, forming an acute angle, much longer than the third; fifth slightly curved outward, slightly oblique, forming a hardly obtuse angle. Allied to C. Cuna. Body pale green: head a little narrower than the chest; suture between the crown and the front very distinct; front rather convex: mouth with a black tip, reaching the hind-hips: eyes not prominent: fore-chest very slightly convex on each side: hind-scutcheon almost angular by the base of each fore-wing: disk of the middle-chest slightly buff; hind-border slightly concave: abdomen pale red, longer than the chest; hind-borders of the segments green: legs pale luteous, partly green; fore-thighs armed with four teeth, one very oblique, near the base, longer than the second and third, which are more upright and near the tip; fourth still nearer the tip, very small: wings colourless; veins black, green towards the base. Length of the body 7 lines; of the wings 22 lines.

a. ——? From Mr. Shuckard's collection.

#### O 238. CICADA LEUCOTHOE.

Nervus transversus 1us rectus, ferè erectus, angulum subobtusum fingens, 2o plus triplo ejus longitudine divisus; 2us rectus, ferè erectus, angulum obtusum fingens, 1o longior; 3us rectus, obliquus, angulum acutum fingens; 4us ferè rectus, obliquus, angulum subacutum fingens, 3o longior; 5us subcurvus, ferè erectus, angulum subrectum fingens.

Second marginal areolet three-fourths of the length of the first; first cross-vein straight, almost upright, forming a very slightly obtuse angle, divided from the second by more than thrice its length; second straight, almost upright, forming an obtuse angle, longer than the first; third straight, oblique, forming an acute angle; fourth almost straight, oblique, forming a very slightly acute angle, longer than the third; fifth very slightly curved outward, almost erect, forming an almost right angle. Body slender, pale red: head with two black bands on the crown, and with two black stripes on the face: eyes prominent; fore-chest with a green stripe between two black stripes; sides almost straight; hind-scutcheon narrow: middle-chest with five black spots, two in front, one in the middle, and two on the hind-border, which is convex: abdomen longer than the chest: oviduct extending beyond the tip: fore-thighs armed

with three sharp, oblique, rather long, black teeth: wings whitish: veins pale red, black towards the tips. Length of the body 6 lines; of the wings 18 lines.

a. Parà. From Mr. Stevens' collection.

#### Page 240.

# Al. CEPHALOXYS UNICOLOR, Fem.

Nervus transversus 1 us ferè rectus, obliquus, angulum acutum fingens, 20 plus triplo ejus longitudine divisus; 2 us vix arcuatus, obliquus, angulum vix acutum fingens, 10 paullò longior; 3 us ferè rectus, obliquus, angulum acutum fingens; 4 us ferè rectus, subobliquus, angulum rectum fingens, 30 vix brevior.

Second marginal areolet about one-fourth shorter than the first; first cross-vein almost straight, oblique, forming an acute angle, parted from the second by more than thrice its length; second hardly curved, oblique, forming a hardly acute angle, a little longer than the first; third almost straight, oblique, forming an acute angle; fourth almost straight, slightly oblique, forming a right angle, hardly shorter than the third; fifth hardly curved outward, upright, forming a right angle. Body slender, pale luteous: front short-conical, as long as it is broad: wings colourless: veins pale luteous. Length of the body 6 lines; of the wings 18 lines.

a. Java. From the East India Company's collection.

# Page 246.

# 9. CARINITA ARGENTEA.

Nervus transversus 1us arcuatus, subobliquus, angulum vix acutum fingens, 2o duplo ejus longitudine divisus; 2us subundatus, obliquus, angulum acutum fingens, 1o paullò longior; 3us ferè rectus, obliquus, angulum acutum fingens; 4us subarcuatus, obliquus, angulum acutum fingens, 3o vix brevior.

Second marginal areolet less than twice the length of the first; first cross-vein curved outward, very slightly oblique, forming a hardly acute angle, parted from the second by twice its length; second very slightly undulating, oblique, forming an acute angle, a

little longer than the first; third almost straight, oblique, forming an acute angle; fourth very slightly curved inward, oblique, forming an acute angle, almost as long as the third; fifth much curved outward, almost upright, forming an almost right angle. Tawny, partly green: head and underside mostly black: sutures of the forechest and borders of the usual obconical marks on the middle chest black: abdomen ferruginous; fore borders of the segments silvery; two filaments at the tip: legs pale ferruginous, marked with black: wings colourless: tips of the wings and of the flaps brown; veins black. Length of the body 9 lines; of the wings 28 lines.

a. Ega, on the Amazon. From Mr. Stevens' collection.

#### Page 247.

C4. TETTIGOMYIA TABANIFORMIS.

d, e. South Africa. From Mr. Argent's collection.

Page 250.

5. MOGANNIA AVICULA.

Java. From the East India Company's collection.

Page 254.

Genus CYSTOSOMA.
Subgenus CHLOROCYSTA, Amyot, MSS.

2. Cystosoma vitripennis.

Cystosoma vitripennis, Westw. Ann. Nat. Hist. Ser. 2, vii. 208. New Holland.

#### Page 262.

#### D 1. FULGORA LATERNARIA.

Fulgora laternaria, Wesmael, Bull. Acad. Roy. Sci. Bruxel. iv. 1837, 136.

#### Page 282.

32. APHÆNA SANGUINALIS.

Aphæna sanguinalis, Westw. Ann. Nat. Hist. Ser. 2, vii. 208. Ceylon.

## 33. APHÆNA MADAGASCARIENSIS.

Aphæna Madagascariensis, Westw. Ann. Nat. Hist. Ser. 2, vii. 208-Madagascar.

#### Page 284.

OMALOCEPHALA PLANIROSTRIS.

This is a species of Ledra. See p. 816.

## √ 6 4. OMALOCEPHALA MOROSA.

Omalocephala morosa, Westw. Ann. Nat. Hist. Ser. 2, vii. 208. Port Natal.

For 10. Lystra terebrifera, read 10. Lystra tenebrifera.

Page 306.

5. DICHOPTERA HERBIDA.

b. Brazil.

Page 309.

11. DICTYOPHORA NOCTIVIDA.

Dulgora noctivida, Oliv. Enc. Méth. vi. 570, 13.

#### Page 324.

#### O Genus 4. SCOLOPS.

Scolops, Schaum.

## 1. Scolops sulcipes.

Fulgora sulcipes, Say, Journ. Acad. Nat. Sci. Philad. iv. 335. Arkansaw.

#### Page 341.

#### 10. CIXIUS NERVOSUS.

Cixius nervosus, Latr. Hist. Nat. Ins. xii. 311. Zett. Faun. Ins. Lapp. i. 546, 1.

Flata nervosa, Panz. Faun. Ins. Germ. cciii. 6.

#### Page 349.

Transfer Var.? Niger, &c., to p. 348, under Cixius flavisigna.

Cixius Cynosbatis, Zett. Faun. Ins. Lapp. i. 547, 2.

#### 34. Cixius quinquelineatus.

Cixius quinquelineatus, Say, Journ. Acad. Nat. Sci. Philad. vi. 241. United States.

## 35. CIXIUS STIGMATUS.

Cixius stigmatus, Say, Journ. Acad. Nat. Sci. Philad. iv. 336. United States.

#### 36. Cixius Pini.

Cixius Pini, Fitch, The Senate, No. 30, 45. United States.

#### O 37. CIXIUS IMPUNCTATUS.

Cixius impunctatus, Fitch, The Senate, No. 30, 46. United States.

#### 38. CIXIUS? SERRATULÆ.

Entæniothes Serratulæ, Fabr. Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 166, 391.

#### Page 349.

#### Genus 8\*. PLECTODERES.

Plectoderes, Spinola, Ann. Soc. Ent. Fr. viii. 328.

## 1. Plectoderes collabis.

Plectoderes collaris, Spinola, Ann. Soc. Ent. Fr. viii. 328.

Flata collaris, Fabr. Syst. Rhyn. 53, 42.

O Cixia collaris, Burm. Handb. Ent. ii. 1, 157.

a. ——?

#### Page 350.

1. ALLELOPLASIS DARWINII.

a. Australia. Presented by C. Darwin, Esq.

Page 359.

752. DELPHAX ARVENSIS.

Delphax arvensis, Fitch, The Senate, No. 30, 46. United States.

53. DELPHAX DORSALIS.

Delphax dorsalis, Fitch, The Senate, No. 30, 46. United States.

Page 373.
44. Issus Algiricus.

Issus algiricus, Lucas, Explorat. Scient. Alger. Atlas, pl. 4, f. 9. Algiers.

# 45. Issus Ellipticus.

Testaceus; alæ anticæ venosæ; alæ posticæ sublimpidæ.

Testaceous: head small, much narrower than the chest; crown narrow, much longer than broad, forming a conical compartment, with a rim along the border, extending along the disk of the front to the face; face scutcheon-shaped, widening towards the epistoma, extremely minutely striated across, with three longitudinal ridges, the side pair slightly curved; epistoma short-conical, bordered by a rim: shield very short: fore-wings with very strongly marked longitudinal veins, between which are many pale, straight, slight crossveins: hind-wings almost colourless. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

a. Philippine Islands. From Mr. Wood's collection.

#### Page 394.

29. EURYBRACHIS CRUDELIS.

Eurybrachis crudelis, Westw. Ann. Nat. Hist. Ser. 2, vii. 208. Ceylon.

#### Page 397.

#### O 9. DERBE SUBSTRIGILIS.

Derbe substrigilis, Westw. Ann. Nat. Hist. Ser. 2, vii. 209. Brazil.

#### Page 399.

#### O 5. PHENICE TESSELLATA.

Derbe (Phenice) tessellata, Westw. Ann. Nat. Hist. Ser. 2, vii. 209. Sierra Leone.

## 6. PHENICE? BICLAVATA.

Derbe (Phenice?) biclavata, Westw. Ann. Nat. Hist. Ser. 2, vii. 209. Derbe biclavata, p., 397.

# 7. PHENICE MŒSTA

Derbe (Phenice) mæsta, Westw. Ann. Nat. Hist. Ser. 2, vii. 209. Derbe mæsta, p. 397, 7.

East Indies.

#### 6 8. PHENICE? DILATATA.

- Derbe (Phenice?) dilatata, Westw. Ann. Nat. Hist. Ser. 2, vii. 209. Derbe dilatata, p. 397.
  - a. Sierra Leone.

## 9. PHENICE? CARNOSA.

Derbe (Phenice?) carnosa, Westw. Ann. Nat. Hist. Ser. 2, vii. 210. East Indies.

#### Page 400.

## P. THRACIA ESSINGTONII.

- ODerbe (Thracia) Essingtonii, Westw. Ann. Nat. Hist. Ser. 2, vii. 210.
- O Derbe Essingtonii, p. 396.

## O5. THRACIA PTEROPHOROIDES.

- O Derbe (Thracia) Pterophoroides, Westw. Ann. Nat. Hist. Ser. 27 vii. 210.
- O Ceylon.

#### Page 401.

### O2. OTIOCERUS COQUEBERTII.

Otiocerus Coquebertii, Var. a. b., Fitch, The Senate, No. 30, 46.

#### Page 402.

#### C8. OTIOCERUS KIRBYII.

Otiocerus Kirbyii, Fitch, The Senate, No. 30, 46. New York.

#### Page 436.

## FLATA MARIA et F. COMPLETA.

These two are perhaps varieties of one species, and the latter is the type of the F. Maria of White.

#### Page 469.

## V ○ 71. PŒCILOPTERA? BIVITTATA.

Flata bivittata, Say, Journ. Acad. Nat. Sci. Philad. iv. 335, 1. Pennsylvania; Missouri.

#### 72. PECILOPTERA STIGMATA.

O Flata stigmata, Say, Journ. Acad. Nat. Sci. Philad. 336, 2.
Missouri.

#### 73. PŒCILOPTERA? NAVA.

O Flata nava, Say, Journ. Acad. Nat. Sci. Philad. vi. 238, 3. Indiana.

#### O 74. PŒCILOPTERA? OPACA.

Flata opaca, Say, Journ. Acad. Nat. Sci. Philad. vi. 239, 4. Indiana, Lake Erie.

#### O 75. Pœciloptera? pallida.

Flata pallida, Say, Journ. Acad. Nat. Sci. Philad. vi. 240, 5.Pennsylvania, Florida.

# 76. PECILOPTERA? BULLATA.

Flata bullata, Say, Journ. Acad. Nat. Sci. Philad. vi. 240, 6. United States.

#### Page 470.

#### O 77. PECILOPTERA? QUINQUELINEATA.

6 Flata quinquelineata, Say, Journ. Acad. Nat. Sci. Philad. vi. 241, 7. New Jersey.

## 78. PECILOPTERA? HUMILIS.

Flata humilis, Say, Journ. Acad. Nat. Sci. Philad. vi. 241, 8. Pennsylvania.

# 81. PECILOPTERA? CONICA.

Flata conica, Say, Journ. Acad. Nat. Sci. Philad. vi. 238, 2. Indiana.

## O 82. PECILOPTERA? VULGARIS.

Peciloptera? vulgaris, Fitch, The Senate, No. 30, 47. United States.

#### Page 473.

Dele Xerophyllum. X. Servillei is Orthopterous, of the genus Hymenotes, Westw.

## 38. PTYELUS MISPACHATHUS.

Mispachathus, Amyot, Ann. Soc. Ent. Fr. 2me Série, v. 194, 427. France, Italy.

Page 531.

18. CERESA BUBALUS.

Ceresa bubalus, Var. a. b., Fitch, The Senate, No. 30, 50.

Page 533.

W34. CERESA? TARTAREA.

Membracis tartarea, Say, Journ. Acad. Nat. Sci. Philad. vi. 242, 1. Pennsylvania.

W 35. CERESA? SEMICURVA.

Membracis semicurva, Say, Journ. Acad. Nat. Sci. Philad. vi. 242, 2.

Florida.

O 36. CERESA? CALVA.

OMembracis calva, Say, Journ. Acad. Nat. Sci. Philad. vi. 242, 3. Pennsylvania.

37. CERESA? GONIPHORA.

Membracis goniphora, Say, Journ. Acad. Nat. Sci. Philad. vi. 243, 4.

Missouri.

38. CERESA? FESTIVA.

Membracis festiva, Say, Journ. Acad. Nat. Sci. Philad. vi. 243, 5. Florida.

Page 535.

11. Smilia auriculata.

Smilia auriculata, Fitch, The Senate, No. 30, 49. New York.

Page 546.
3. Entilia sinuata.

Subspecies, E. torva, Fitch, The Senate, No. 30, 47. New York.

W 5. ENTYLIA CONCAVA.

Entylia concava, Say, Append. Long's Exp. 301. Fitch, The Senate, No. 30, 47.

Page 559.

W 13. THELIA LUTEA.

Centrotus inermis? Fabr. Ent. Syst. iv. 15.

Page 561.
W 16. THELIA VAU.

<sup>O</sup>Smilia Vau, Say, Journ. Acad. Nat. Sci. Philad. vi. 299, 6, Var. a-j. Fitch, The Senate, No. 30, 48.

OThelia semifascia, 561, 16.

Pennsylvania.

Page 564.

W 30. THELIA ACUMINATA.

O Centrotus acuminatus, Fabr. Mas. Membracis bimaculata, Fabr. Fæm. See p. 566.

W 42. Thelia inornata.

U Smilia inornata, Say, Journ. Acad. Nat. Sci. Philad. vi. 299, 7, Var. a. Fitch, The Senate, No. 30, 48. Pennsylvania.

# W 43. THELIA? SUBULATA.

OMembracis subulata, Say, Journ. Acad. Nat. Sci. Philad. vi. 300, 8.

Maryland.

44. Thelia? QUADRIVITTATA.

Membracis quadrivittatá, Say, Journ. Acad. Nat. Sci. Philad. vi. 300, 9.

Maryland.

45. Thelia? BELLIGERA.

Membracis belligera, Say, Journ. Acad. Nat. Sci. Philad. vi. 302, 13.

Pennsylvania, Florida.

46. THELIA? VITTATA.

Subspecies, Smilia guttata, Fitch, The Senate, No. 30, 49. Thelia camelus? p. 562, 19.

W47. THELIA QUERCUS.

Osmilia Quercûs, Fitch, The Senate, No. 49.

New York.

MAS. THELIA CASTANEÆ.

Smilia Castaneæ, Fitch, The Senate, No. 30, 49. New York.

X 49. THELIA? UNIVITTATA.

Thelia univittata, Harris, Inj. Ins. New Engl. 180. United States.

W 50. THELIA? CRATÆGI.

Thelia Cratægi, Fitch, The Senate, No. 30, 52. New York.

, Cat.

W51. THELIA? SINUATA.

Membracis sinuata, Fabr.
Membracis? emarginata, Fabr. Ent. Syst. Suppl. 513, 4. Syst.
Rhyn. 9, 12.

United States.

Dase + VGenus CARANOTA. ISie 1

Caronata, Fitch, The Senate, No. 30, 48. Membracis, p., Say.

"Head broad, triangular: thorax in form of a half cone, not compressed above into a sharp or foliaceous edge: elytra with five terminal areolets, the apical triangular with its end rounded: border broad, slightly wrinkled: veins strong, elevated. Allied to Gargara, from which genus, however, the species are excluded by the form of the head and of the apical areolet."

W 1. CARANOTA MERA.

Membracis mera, Say, Journ. Acad. Nat. Sci. Philad. vi. 301, 10. Pennsylvania.

W2. CARANOTA ARCUATA. ISACI

Membracis arcuata, Say, Journ. Acad. Nat. Sci. Philad. vi. 302, 12. Pennsylvania.

SUPPLEMENT.

Genus TELAMONA.

Telamona, Fitch, The Senate, No. 30, 50. Thelia, p., Fairm.

"Humeral angles projecting, pointed and ear-like: dorsum compressed, foliaceous, the keel abruptly elevated at one or both its ends, forming a somewhat square crest or foliole: thorax nearly or quite reaching the tips of the elytra, with elevated longitudinal lines on each side; apical areolet triangular, its end rounded. The rather square dorsal crest forms a marked distinction between this genus and Thelia, to which it is most nearly related."

W 1. TELAMONA QUERCUS.

Telamona Quercus, Fitch, The Senate, No. 30, 51. Thelia cyrtops, Fairm. See p. 565, 31.

N 2. TELAMONA RECLIVATA.

Telamona reclivata, Fitch, The Senate, No. 30, 51. New York.

7 3. TELAMONA CORYLI.

Telamona Coryli, Fitch, The Senate, No. 30, 51. New York.

W 4. TELAMONA TRISTIS.

Telamona tristis, Fitch, The Senate, No. 30, 51. New York.

W 5. TELAMONA AMPELOPSIDIS.

Thelia Ampelopsidis, Harris, Inj. Ins. New Engl. 180. Telamona Ampelopsidis, Fitch, The Senate, No. 30, 51. United States.

W 6. TELAMONA FAGI.

Telamoni Fagi, Fitch, The Senate, No. 30, 51. New York.

7. TELAMONA CONCAVA.

Telamona concava, Fitch, The Senate, No. 30, 50. New York.

W 8. TELAMONA FASCIATA.

Telamona fasciata, Fitch, The Senate, No. 30, 50. New York.

W9. Telamona unicolor.

Telamona unicolor, Fitch, The Senate, No. 30, 50. New York.

Deac. WGenus CYRTOSIA.

Cyrtosia, Fitch, The Senate, No. 30, 49. Membracis, p., Say.

"Humeral angles rounded, not salient: dorsum compressed, foliaceous, forming a regularly arched keel, highest near its middle, and at most with a slight concavity posteriorly: apical areolet triangular, its end rounded. Differs from *Smilia*, in having the keel most elevated in its middle instead of anteriorly."

# W 1. CYRTOSIA MARMORATA.

Membracis marmorata, Say, Journ. Acad. Nat. Sci. Philad. vi. 301, 11.

Pennsylvania.

Cyrtosia fenestrata, Fitch, The Senate, No. 30, 49. New York.

Page 584.

W, 28. Tragopa dorsalis.

Tragopa dorsalis, Fitch, The Senate, No. 30, 52. New York.

Page 630.

76. Centrotus Caryæ.

Uroxiphus Caryæ, Fitch, The Senate, No. 30, 52. New York.

W77. CENTROTUS FASCIATUS.

Fulvus, punctatus, pilosus, nigro varius; cornua lateralia valida acuta; cornu posticum breve, piceum, flavo-fasciatum; abdomen nigro fasciatum; alæ anticæ fulvæ, fusco unifasciatæ.

Fem.—Tawny, varied with black, hairy, thickly punctured: crown vertical, irregularly triangular; hind-border slightly concave in the middle, with a very obtuse angle on each side; face shortconical: fore-chest rising almost perpendicularly from the head, with a very indistinct keel, armed with two long acute horns, which are slightly curved backwards, and very slightly inclined upwards; the length of each rather exceeding that of the space between them; hind part long-obconical, with a furrow, not more than one-fourth of the length of the abdomen, pitchy, with a yellow stripe towards the base, yellow towards the tip: abdomen yellowish, with a broad black band above : legs with irregular black bands : fore-wings tawny, punctured at the base and along the veins, with a broad brown band in the middle; veins tawny: hind-wings almost colourless. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

a. Brazil.

CENTROTUS ---- ? (Pupa).

Acanthicus Desmarestii, DeLap. Ann. Soc. Ent. Fr. i. 228.

Brazil.

CENTROTUS ----? (Pupa).

Acanthicus Stollii, DeLap. Ann. Soc. Ent. Fr. i. 228. Stoll, pl. 16, f. 85.

Brazil.

# Page 638. Genus 1. EURYMELA.

- A. Fore-wings with a straight suture: hind-shanks with not more than two spines.
  - Last abdominal segment transverse. Signoret.

18. EURYMELA BICOLOR.

Eurymela bicolor, Burm. Gen. Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 503, 1, pl. 17, No. 2, f. 9.

New Holland.

# 2. EURYMELA RUBROVITTATA.

Eurymela rubrovittata, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 504, 2.

Last abdominal segment consisting of two laminæ. Signoret.

#### 61. EURYMELA FENESTRATA.

Eurymela fenestrata, Signoret, Ann. Soc. Ent. Fr. 2me Série, 505, 3.

## 19. EURYMELA DISCOIDALIS.

Eurymela discoidalis, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 505, 4.

New Holland.

# 3. EURYMELA RUFICOLLIS.

Eurymela ruficollis, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 506, 5.

## 8. EURYMELA DISTINCTA.

Eurymela distincta, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 506, 6.

Eurymela vicina, Signoret, Ann. Soc. Ent. Fr. 7, var.

Eurymela speculum, Walk.

## 4. EURYMELA ERYTHROCNEMIS.

Eurymela erythrocnemis, Signoret, Ann. Soc. Ent. Fr. 2me Série viii. 507,8.

## 17. EURYMELA MARMORATA.

Eurymela marmorata, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 507, 9.

# © 20. EURYMELA MAURA.

Eurymela maura, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 507, 10.

Cicada maura, Fabr. Ent. Syst. iv. 40, 57.

C Flata maura, Fabr. Syst. Rhyn. 51, 27.

New Holland.

B. Fore-wings overlapping: hind-shanks with a double row of spines. Signoret.

## O9. EURYMELA PULCHRA.

Eurymela pulchra, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 508, 11, pl. 17, 11, f. 10. () Eurymela discifera, Walk.

PART IV.

## 21. EURYMELA LINEATA.

Eurymela lineata, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 509, 12, pl. 17, f. 11.

New Holland.

#### O22. EURYMELA ADSPERSA.

Eurymela adspersa, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 510, 13, pl. 17, 11, f. 2.

New Holland.

### 75. EURYMELA BICINCTA.

Eurymela bicineta, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 510, 14, pl. 17, 11, f. 12.

#### 23. EURYMELA OCELLATA.

Eurymela ocellata, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 511, 15, pl. 17, 11, f. 13.

New Holland.

## 24. EURYMELA PUNCTATA.

Eurymela punctata, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 511, 16.

New Holland.

## ©25. EURYMELA TRIFASCIATA.

Eurymela trifasciata, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 512, 17, pl. 17, 11, f. 14.

New Holland.

## 26. EURYMELA PORRIGINOSA.

Eurymela porriginosa, Signoret, Ann. Soc. Ent. Fr. 2me Série, viii. 512, 18.

New Holland.

# Page 651. Genus 2. COLOBORRHIS.

Coloborrhis, Germar, Silberm. Rev. Ent. iv.

# 1. Coloborrhis corticina.

Coloborrhis corticina, Germ. Silb. Rev. Ent. iv. 73. Amyot et Serv. Hist. Nat. Hém. 648.

Cape.

#### Page 665.

## 48. CERCOPIS STRONGII.

Cercopis Strongii, Westw. Trans. Ent. Soc. Lond. ii. 56, pl. 7, f. 12.

East Indies. In Gum Animè.

## 49. CERCOPIS TRANSVERSA.

Nigra, subtus obscurè testacea; thoracis fascia antica scutelli apice pedibusque testaceis; abdomen purpureum; alæ anticæ testaceæ, antice et ad apices nigro-fuscæ, costa apicem versus albo-maculata.

Black, dark testaceous beneath: a broad band on the forechest; tip of the scutcheon and legs testaceous: abdomen purple: fore-wings testaceous, dark brown along the fore border and at the tip, near which there is a white spot. Length of the body  $4\frac{1}{2}$  lines; of the wings 10 lines.

a, b. Java.

#### Page 669.

## 4. TRIECPHORA 5-MACULATA.

Cercopis 5-maculata, Germ. Lucas, Explorat. Scient. Alger. Atlas, pl. 4, f. 7.

Algiers.

#### Page 670.

O Triecphora analis = Rhinaulax analis, p. 667.

#### Page 674.

#### 20. Triecphora? bicincta.

© Cercopsis bicincta, Say, Journ. Acad. Nat. Sci. Philad. vi. 303. Indiana, Pensylvania, Arkansaw.

## Page 685.

37. Monecphora interrupta.

Ptyelus interruptus, p. 715.
Allied to M. albo-atra.

#### G 38. Monecphora rufo-picea.

Ferrugineo-rufa, piceo varia; pectus, abdomen et femora nigra; tibiæ testaceæ; tarsi ferruginei; alæ anticæ ferrugineæ, apice nigræ fulvo maculatæ; venæ flavo guttatæ; alæ posticæ fulvo unimaculatæ.

Ferruginous red, smooth, shining, partly pitchy: head small, short, much narrower than the chest, rounded in front, concave along the hind border, longer in the middle than on each side; crown much longer than broad, with a rim on each side; face pitchy, very long, flat on the disk, very minutely shagreened, thinly punctured; epistoma almost semicircular towards the face, subquadrate, and with a slight longitudinal ridge towards the mouth: shield slightly tuberculate, very convex in front, almost straight along the hind border; scutcheon with a slightly arched suture across the middle: breast black; segments with testaceous borders: abdomen nearly all black: thighs black, their tips and the shanks testaceous; feet ferruginous: fore-wings ferruginous for half the length from the base, black from thence to the tips, with a large tawny spot on each bor-

der at three-fourths of the length; veins with a few yellow dots: hind-wings brown, with a tawny spot on each fore border. Length of the body 4 lines; of the wings 9 lines.

a. Columbia. From M. Jurgens' collection.

#### Page 704.

O For 5. PTYELUS OBTUSUS, read 5. PTYELUS HEBES.

#### Page 713.

#### 23. PTYELUS PARALLELLUS.

Lepyronia parallella, Say, App. Long's Exp. 303.

#### Page 7:4.

## 24. PTYELUS SARAGOTENSIS.

Lepyromia Saragotensis, Fitch, The Senate, No. 30, 53. Ptyelus gelidus, 714, 24.

#### Page 716.

#### 28. PTYELUS QUADRANGULARIS.

- Cercopis quadrangularis, Say, Journ. Acad. Nat. Sci. Phil. iv. 338, 1.
  - e. Lake Winepeg. Presented by Sir John Richardson. f. Great Bear Lake. Presented by Sir John Richardson.

#### Page 718.

For Colenso, read New Zealand; so also elsewhere where the name occurs.

#### Page 719.

36. PTYELUS BIFASCIATUS.

ddd. Nova Scotia. From Lieut. Redman's collection.

#### Page 724.

48. PTYELUS? OBTUSUS.

© Cercopis obtusa, Say, Journ. Acad. Nat. Sci. Philad. iv. 339, 2. United States.

#### Page 725.

O 50. PTYELUS? BILINEATUS.

O Aphrophora bilineata, Say, Journ. Acad. Nat. Sci. Philad. vi. 304, 1.

Missouri.

## 51. PTYELUS? QUADRINOTATUS.

Aphrophora quadrinotata, Say, Journ. Acad. Nat. Sci. Philad. vi. 304, 2.

United States.

## 52. PTYELUS DISTINCTUS.

Ptyelus distinctus, Lucas, Explorat. Sci. Alger. Atlas, pl. 4, f. 8. Algiers.

Page 733.

Group 1.

## Genus TETTIGONIA.

Most of the species which are described in this Catalogue may be arranged in the following groups.

Head slightly rounded above and in front.

Sp. 1, 3—6, 12, 17, 21, 22, 40—44, 46—49, 58—61, 64—66, 68, 69, 71, 73—75, 81, 83, 88, 93, 97, 105.

#### Group 2.

Head more flat above and a little more produced in front, but not conical.

Sp. 24—33.

#### Group 3.

Head flat above, conical or augular in front.

Sp. 23, 35—37, 39, 45, 50—57, 72, 80, 82, 85—87, 89, 90—92, 95, 96, 99, 100—104.

#### Group 4.

Much like Group 2. Hind part of the head depressed across. Sp. 34.

#### Group 5.

Much like Group 3. Abdomen contracted at the base. Sp. 38.

#### Group 6.

Head very short, slightly truncated in front. Sp. 62.

#### Group 7.

Body spindle-shaped. Head short, almost conical in front. Allied to Gypona. Sp. 67.

#### Page 764.

#### C 87. TETTIGONIA QUADRIVITTATA.

Tettigonia quadrivittata, Say, Journ. Acad. Nat. Sci. Phil. vi. 312, 3.

Proconia quadrivittata, Vars. a—e., Fitch, The Senate, No. 30, 55. — Tettigonia teliformis, p. 764, 84.

## 95. Tettigonia communis.

Helochara communis, Fitch, The Senate, No. 30, 56. Tettigonia herbida, Walk. Cut. Hom. p. 769, 95.

#### @ Genus HELOCHARA.

Helochara, Fitch, The Senate, No. 30, 56.

Head obtuse-triangular, broader than long, slightly broader than the thorax, the transversely striated front reflected over on the anterior sides of the vertex; vertex with a slight longitudinal stria; ocelli on the vertex farther from each other than from the eyes: tips of the male antennæ knobbed: elytra with five terminal and three discoidal areolets.

#### Page 773.

#### ○ 103. Tettigonia mollipes.

Tettigonia mollipes, Say, Journ. Acad. Nat. Sci. Phil. vi. 312, 4. Tettigonia acuta, p. 773, 103.

#### Page 782.

#### O 128. Tettigonia trifasciata.

Tettigonia trifasciata, Say, Journ. Acad. Nat. Sci. Philad. iv. 343, 6.

Missouri.

This and T. trifasciata, Amyot et Serv. (p. 733) may belong to distinct genera, in which case the latter may retain its specific name.

#### © 129. Tettigonia basilaris.

Tettigonia basilaris, Say, Journ. Acad. Nat. Sci. Philad. iv. 344, 7.

Missouri.

# 130. TETTIGONIA OCTOLINEATA.

Tettigonia octolineata, Say, Journ. Acad. Nat. Sci. Philad. iv. 340, 1.

Missouri.

#### ○ 131. TETTIGONIA LIMBATA.

Tettigonia limbata, Say, Journ. Acad. Nat. Sci. Philad. iv. 340, 2. Missouri.

#### 132. Tettigonia mixta.

Tettigonia mixta, Say, Journ. Acad. Nat. Sci. Philad. iv. 341, 3. Missouri.

## 133. Tettigonia obliqua.

Tettigonia obliqua, Say, Journ. Acad. Nat. Sci. Philad. iv. 342, 4. United States.

#### 134. Tettigonia comes.

Tettigonia comes, Say, Journ. Acad. Nat. Sci. Philad. iv. 343, 5. Missouri.

## 135. TETTIGONIA OCCATORIA.

Tettigonia occatoria, Say, Journ. Acad. Nat. Sci. Philad. vi. 311, 1.

Indiana.

## 136. TETTIGONIA VERSUTA.

Tettigonia versuta, Say, Journ. Acad. Nat. Sci. Philad. vi. 311, 2. United States.

#### O 137. TETTIGONIA BIFIDA.

Tettigonia bifida, Say, Journ. Acad. Nat. Sci. Philad. vi. 313, 5. Vars. a—c., Fitch, The Senate, No. 30, 55. Indiana.

#### 38. Tettigonia hieroglyphica.

Tettigonia hieroglyphica, Say, Journ. Acad. Nat. Sci. Philad. vi. 313, 6.

Arkansaw.

#### C 139. TETTIGONIA TRIPUNCTATA.

Tettigonia tripunctata, Fitch, The Senate, No. 30, 55. New York.

### C 140. TETTIGONIA NOVEBORACENSIS.

Aulacizes Noveboracensis, Fitch, The Senate, No. 30, 56. New York.

## C 141. Tettigonia inimica.

Amblycephalus? inimicus, Say, Journ. Acad. Nat. Sci. Philad. vi. 305.

United States.

## 142. TETTIGONIA MELSHEIMERII.

Amblycephalus Melsheimerii, Fitch, The Senate, No. 30, 61.

a. New York. From Dr. Fitch's collection.

## 143. Tettigonia Sayii.

OAmblycephalus Sayii, Fitch, The Senate, No. 30, 61.

a. New York. From Dr. Fitch's collection.

#### Ö144. TETTIGONIA CURTISII.

Amblycephalus Curtisii, Fitch, The Senate, No. 30, 61. New York.

6 145. TETTIGONIA ORBITALIS

Evacanthus orbitalis, Fitch, The Senate, No. 30, 57. New York.

Page 827.

For 39. LEDRA CULOBATA, read 39. LEDRA CULTRATA.

Page 831.

Tlasia, Germ. Silb. Rev. Ent. iv.

101. TLASIA BRUNNIPENNIS.

Tlasia brunnipennis, Germ. Silb. Rev. Ent. iv. 72. Amyot et Serv. Hist. Nat. Hém. 648.

Cape.

Page 839.

19. GYPONA SCARLATINA.

√ Gypona scarlatina, Fitch, The Senate, No. 30, 57.

New York.

V 0 20. GYPONA FLAVILINEATA.

Gypona flavilineata, Fitch, The Senate, No. 30, 57. Tettigonia 8-lineata, Var. a. Say.

New York.

#### Page 842.

## 6. PENTHIMIA AMERICANA.

Penthimia americana, Fitch, The Senate, No. 30, 57.

New York.

## 1. CLASTOPTERA ACHATINA.

Tettigonia obtusa? Say, Journ. Acad. Nat. Sci. iv. 339.

#### Page 843.

#### 8. CLASTOPTERA TESTACEA.

Clastoptera testacea, Fitch, The Senate, No. 30,53. New York.

## O 9. CLASTOPTERA PINI.

Clastoptera Pini, Fitch, The Senate, No. 30, 53. New York.

## 10. CLASTOPTERA PROTEUS.

Clastoptera Proteus, Fitch, The Senate, No. 30, 54.

O Sub-sp. 1. flavicollis, Vars. a, b. Fitch.

,, 2. cincticollis, Vars. a—d. Fitch.

3. maculicollis, Vars. a-c. Fitch.

,, 4. nigricollis, Vars. a-d. Fitch.

New York.

#### Page 851.

## - 25. Acocephalus vitellinus.

Acocephalus vitellinus, Fitch, The Senate, No. 30, 57. New York.

#### Page 856.

#### 92. Cœlidia subrifasciata.

Iassus subbifasciatus, Say, Journ. Acad. Nat. Sci. Philad. vi. 310, 11.
Pennsylvania.

#### 2.13. CŒLIDIA OLITORIA.

Classus olitorius, Say, Journ. Acad. Sci. Philad. vi. 310, 10. Pennsylvania.

#### Page 876.

58. Bythoscopus tergatus.

Bythoscopus tergatus, Fitch, The Senate, No. 30, 58. New York.

€59. BYTHOSCOPUS UNICOLOR.

Bythoscopus unicolor, Fitch, The Senate, No. 30, 58. New York.

## 60. Bythoscopus seminudus.

Olassus seminudus, Say, Journ. Acad. Nat. Sci. Philad. vi. 307, 4. United States.

## © 61. Bythoscopus lachrymalis.

Idiocerus lachrymalis, Fitch, The Senate, No. 30, 58. New York.

#### 2 62. Bythoscopus maculipennis.

Idiocerus maculipennis, Fitch, The Senate, No. 30, 59.
New York.

PART IV.

- 263. Bythoscopus suturalis.
- O Idiocerus suturalis, Fitch, The Senate, No. 30, 59. New York.
  - 64. BYTHOSCOPUS PALLIDUS.
  - Idiocerus pallidus, Fitch, The Senate, No. 30, 59. New York.
    - © 65. Bythoscopus viridis.
- Pediopsis viridis, Fitch, The Senate, No. 30, 59. New York.
  - O 66. BYTHOSCOPUS TRIMACULATUS.
  - Pediopsis trimaculatis, Fitch, The Senate, No. 30, 60. New York.
    - <sup>©</sup>67. Bythoscopus Abietis.
  - Athysanus Abietis, Fitch, The Senate, No. 30, 60. New York.
    - 68. Bythoscopus fenestratus.
  - Athysanus fenestratus, Fitch, The Senate, No. 30, 60. New York.
    - 69. BYTHOSCOPUS FAGI.
  - Athysanus Fagi, Fitch, The Senate, No. 30, 61. New York.
    - 70. BYTHOSCOPUS NIGRINASI.
  - O Athysanus nigrinasi, Fitch, The Senate, No. 30, 61. New York.

# 71. Bythoscopus testaceus.

Testaceus; abdominis dorsum fuscum; pedes postici albidi; alæ anticæ albo guttatæ; alæ posticæ subcinereæ.

Testaceous, paler beneath: head extremely short, as broad as the chest; crown forming an edge which is very obtusely angular; front and face flat, punctured; eyelets seated on the hind border of the face; epistoma small, almost square: chest slightly striated across; shield convex along the fore border, hardly concave behind; scutcheon triangular, almost equilateral, not extending beyond the hind-chest, with an arched suture beyond the middle: back of the abdomen brown: legs pale testaceous; hind-legs whitish; spines of the hind-shanks few and small: fore-wings testaceous, with numerous white dots: hind-wings very slightly gray. Length of the body 2 lines; of the wings 5 lines.

a. New Holland. Presented by the Entomological Club.

#### Page 895.

## 101. IASSUS ANNULIPES.

Iassus annulipes, Lucas, Explorat. Scient. Alger. Atlas, pl. 4, f. 10. Algiers.

#### 102. IASSUS? INIMICUS.

I assus inimicus, Say, Journ. Acad. Nat. Sci. Philad. vi. 305, 1. Virginia.

#### 103. IASSUS? ACUTUS.

Iassus acutus, Say, Journ. Acad. Nat. Sci. Philad. vi. 306, 2. Indiana.

#### (7) 104. IASSUS? IMMISTUS.

Iassus immistus, Say, Journ. Acad. Nat. Sci. Philad. vi. 306, 3. Indiana; Missouri.

#### O 105. IASSUS? SANCTUS.

Iassus sanctus, Say, Journ. Acad. Nat. Sci. Philad. vi. 307, 5. Indiana.

#### ○ 106. IASSUS? VERTICIS.

Iassus verticis, Say, Journ. Acad. Nat. Sci. Philad. vi. 308, 6. Missouri.

## 107. IASSUS? NOVELLUS.

Iassus novellus, Say, Journ. Acad. Nat. Sci. Philad. vi. 309, 8. Indiana.

#### 2 108. Tassus? IRRORATUS.

Iassus irroratus, Say, Journ. Acad. Nat. Sci. Philad. vi. 308, 7. Pensylvania, Indiana, Missouri, Florida.

## 109. IASSUS? CLITELLARIUS.

Iassus clitellarius, Say, Journ. Acad. Nat. Sci. Philad. vi. 309, 8. Indiana.

#### C110. IASSUS EXTREMUS.

Ferrugineus; caput subtus piceo varium, inter oculos albidum; pectoris discus niger; abdomen supra nigricans; femora basi nigra; alæ posticæ limpidæ.

Pale ferruginous: head and chest thickly and minutely punctured: head flat, almost triangular, narrower than the chest, hardly concave along the hind border; its length a little less than half its breadth; underside whitish between the eyes; face and epistoma mostly pitchy: chest almost flat; shield with a slight longitudinal ridge: disk of the breast black: abdomen blackish above: thighs black towards the base: fore-wings thickly punctured from the base. to the tips, reticulated towards the tips: hind-wings colourless. Length of the body  $1\frac{1}{2}$  line; of the wings 3 lines.

a. Europe. Presented by M. Goureau.

## 58. TYPHLOCYBA VULNERATA.

Erythroneura vulnerata, Fitch, The Senate, No. 30, 62. New York.

## 59. Typhlocyba affinis.

Erythroneura affinis, Fitch, The Senate, No. 30, 63. New York.

#### © 60. Typhlocyba Quercus.

Empoa Quercûs, Fitch, The Senate, No. 30, 63. New York.

#### 61. Typhlocyba coccinea.

Empoa coccinea, Fitch, The Senate, No. 30, 63. New York.

#### © Genus. ERYTHRONEURA.

Erythroneura, Fitch, The Senate, No. 30, 62.

Head crescentiform, about as broad as the thorax; vertex rounded down to the front without an angular edge; ocelli between the vertex and the front, almost as near each other as to the eyes: elytra without closed areolets in the disk; apical areolets four, rather long; middle apical areolet simple. Exterior and middle-veins sometimes obsolete in advance of the transverse-vein.

#### OGenus EMPOA.

Empoa, Fitch, The Senate, No. 30, 63,

Differs from *Erythroneura* in having the apical vein widely forked, forming a triangular apical areolet, which is shorter than the three other terminal areolets.

These two genera may be united to Typhlocyba.

#### Page 897.

5. Typhlocyba citrinella.

Typhlocyba citrinella, Tollin, Ent. Zeit. Stett. xii. 71, pl. 1, f. 1.

Page 898.

10. TYPHLOCYBA BLANDULA.

Typhlocyba blandula, Tollin, Ent. Zeit. Stett. xii. 71, pl. 1, f. 1.

O15. Typhlocyba Rosæ.

Typhlocyba Rosæ, Tollin, Ent. Zeit. Stett. xii. 70, pl. 1. f. 1.

Page 900.

20. TYPHLOCYBA VITTATA.

Typhlocyba vittata, Tollin, Ent. Zeit. Stett. xii. 72, pl. 1, f. 4.

Page 902.
26. Typhlocyba smaragdula.

Typhlocyba smaragdula, Tollin, Ent. Zeit. Stett. xii. 72, pl. 1, f. 5.

29. Турньосува ріста.

Typhlocyba picta, Tollin, Ent. Zeit. Stett. xii. 72, pl. 1, f. 4.

Page 903.

Typhlocyba Urticæ, Tollin, Ent. Zeit. Stett. xii. 72, pl. 1, f. 4.

## ©58. Typhlocyba concinna.

Typhlocyba concinna, Tollin, Ent. Zeit. Stett. xii. 72, pl. 1, f. 4.

## 59. TYPHLOCYBA CORYLI, n. s.

Typhlocyba Coryli, Tollin, Ent. Zeit. Stett. xii. 70, 72, pl. 1, f. 6. Germany.

## 60. Typhlocyba Roseipennis, n. s.

Typhlocyba roseipennis, Tollin, Ent. Zeit. Stett. xii. 72. Germany.

#### Tollin groups the Typhlocybæ thus:-

- i. Elytra marginata; areolis quatuor. T. elegantula, Ulmi.
- ii. Elytra immarginata.

#### a. Areolis quatuor.

- 1. Areola elytrorum tertia basi truncata. Alæ marginatæ.
- a. Alæ venis apicalibus tribus.

  T. citrinella, aureola, micantula.
- b. Alæ venis apicalibus duabus. T. viridula, flavescens.
- c. Alæ venis apicalibus quatuor. T. sulphurella.
- 2. Areola elytrorum quarta minutissima et apice remota. Alæ immarginatæ.
- a. Alæ venis apicalibus tribus, prima basi dichotoma et cum tertia apice convergentibus.
   T. Hyperici, blandula, 10-punctata, Scutellaris.
- b. Alæ venis apicalibus tribus, prima et tertia basi dichotomis, secunda ad 3am approximata.
   T. Coryli.

- 3. Areola elytrorum tertia basi acuminata petiolata. Alæ immarginatæ.
- a. Alæ venis apicalibus quatuor.
  - T. concinna, vittata, picta, Urticæ, fulva, jucunda, tenella, adspersa, stellulata.
- b. Alæ venis apicalibus tribus.
  - T. Rosæ, fasciata, Quercûs, nitidula, 6-punctato, tenerrima, cruenta, lineatella.
  - β. Areolis elytrorum tribus. Alæ marginatæ, venis duabus. T. smaragdula.

#### APHIS TANACETICOLA.

Aphis Tanaceticola, Wahlberg, Ofvers, Vet. Akad. Försch. 1844, 153. Hornsch. Arch. Scand. Beitr. i. 177.

#### Page 953.

#### 28. Aphis littoralis.

a. k. England. Presented by F. Walker, Esq.

#### 29. Aphis Hirtella.

Insert, Distance between the first and second veins at the base rather less than half that between them at the tips; third much nearer to the second at the base than at the tip, farther at the base from the second than the second is from the first; first fork much nearer to the second fork than to the third vein, as near to the third vein as the third is to the second; second fork as near to the fourth vein as to the first fork; fourth vein hardly curved, nearer to the second fork than to the tip of the rib-vein.

#### 30. APHIS CYPERI.

Distance between the first and second veins at the tips about thrice farther than that between them at the base; third twice farther from the second at the tip than at the base, much nearer to the second at the base than the second is to the first; first fork very much nearer to the second fork than to the third vein, farther from

the third vein than the third is from the second; second fork a little nearer to the fourth vein than to the first fork; fourth vein slightly curved near the base, straight from thence to the tip; much nearer to the second fork than to the tip of the rib-vein.

a. Ireland. Presented by A. H. Haliday, Esq.

32. APHIS BUFO.

a. England. Presented by F. Walker, Esq.

Page 1050.

BYRSOCRYPTA PALLIDA, Hal.

Aphis alba, Ratz. Forst. Ins. iii. 222, pl. 13, f. 3.

Page 1095.

For antennæ recurva read antennæ recurvæ.

Page 1096.

For tenuis ore read tenuiore.

Page 1110 and 1113.

For Passim, frequens read Passim frequens.

Page 1116.

For apiculum attenuatum read apiculam attenuatam.

Page 1117.

For subrufæ read subrufa.

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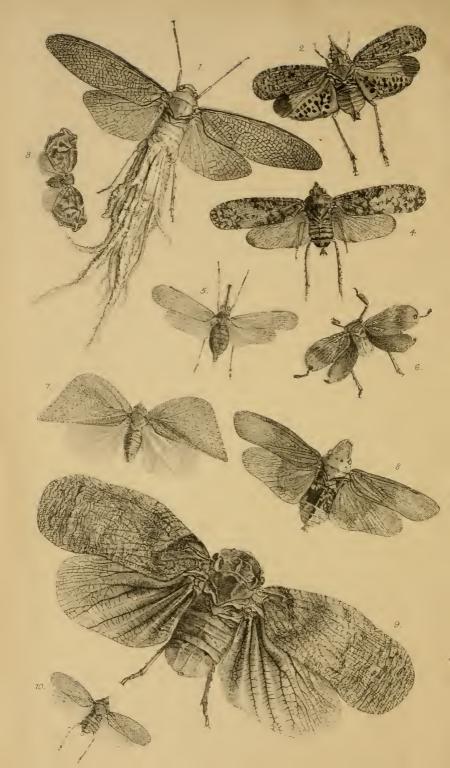
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## EXPLANATION OF PLATES.

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Fig. 1. Dundubia diminuta

2. Fidicina nivifera

3. Tettigades compacta 4. Zammara smaragdina

5. Cicada tristigma

6. Thopha, (New sp.).

## TAB. II.

Fig. 1. Wing of Cyclochila honesta ,, 2. Tettigarcta tomentosa

3. Pupa do.

4. Cystosoma Saundersii 5. Mogannia ignifera

6. Cicada aurora

## TAB. III.

Fig. 1. Pterodictya ephemera

2. Enchophora sicca

3. Flatoides retractus

4. Dichoptera smaragdina 5. Dictiophora chlorochroma

6. Ancyra appendiculata

7. Phyllyphanta producta

8. Rhinortha guttata 9. Paralystra Emma

10. Aselgeira ramulifera

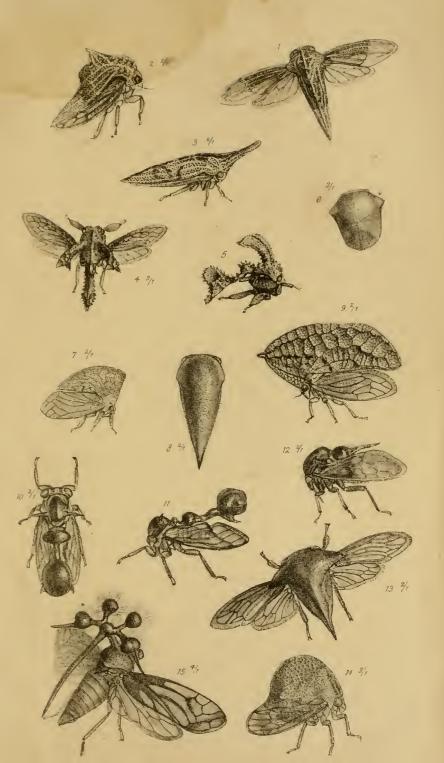
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- Fig. 1, 2. Oxygonia auriflua
  3. Polyglypta dorsalis
  4, 5. Pterygia horrifica
  6. Tragopa tetyrides
  - 6. Tragopa tetyrides7. Membracis marginalis8. Darnis convoluta
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  - ,, 12. Ceresa incrassata ,, 13. Hemiptycha brevis
  - " 14. Combophora consentanea " 15. Bocydium globulare, Fab.

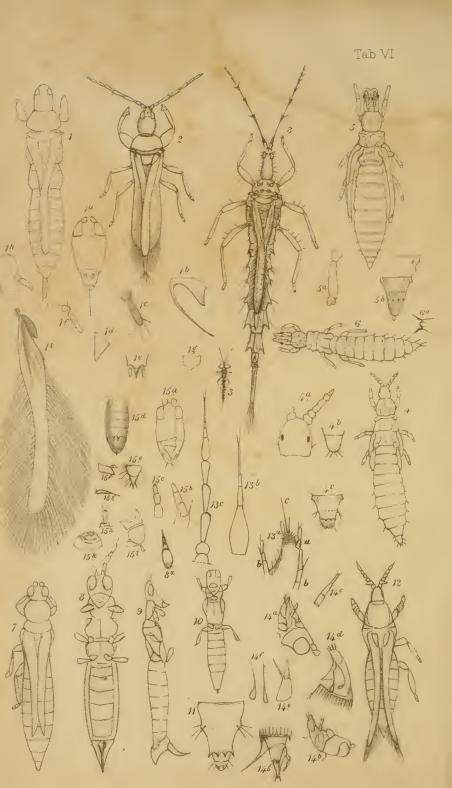
### TAB. V.

### PHYSAPODA.

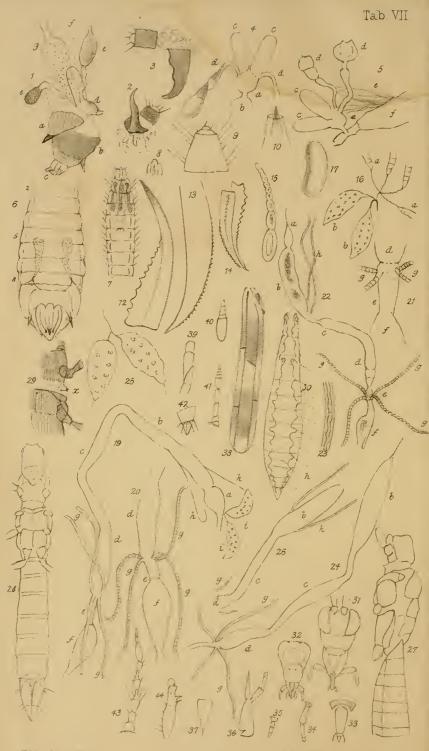
- Fig. 1. Thrips Ulmi. Young larva. a. Antenna. b. End of abdomen.
  - , 2. Larva. a. Head. b, c. Mouth of larva.
  - " 3. Propupa. " 4. Pupa.
  - 3. Aptinothrips rufa, larva, Q. a. Antenna without the two basal joints. b. Tibia. c. Terminal orifice of abdomen with the whorl of hairs.
  - ,, 6. Propupa, Q. a. Antenna. b. Fore leg.
  - 7. Pupa, Q. a. Antenna. b. Tibia. c. End of abdomen. 8. Pupa, Q, lateral view. a. Antenna. b. End of abdomen.
  - 9. Abdomen of A. rufa, 3, vertical view. a. End of abdomen.
  - , 10. Do., side view.
  - ,, 11. A. rufa, Q. a. Face. b. Fore leg. c. Abdomen, with ventricle in situ.
  - " 12. Melanthrips obesa, larva. a. Antenna. b. Eye. c, d. Tail.
  - 7, 13, a. Antenna of imago. b. Maxilla. c. Labium. d. Mouth. e. Fore leg.
  - " 14. Sericothrips. a. Antenna. 6. Hemelytron.











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#### TAB. VI.

Fig. 1. Phlaothrips Ulmi, imago. a. Face. b. Tongue? c, d. Maxillary palpus. e. End of mouth, with labial palpi. f. Base of maxilla, with the palpus. g. Hemelytron.

13. Heliothrips. a. Mouth. b. Maxillary palpus. 13, c.

Antenna. 13, d. Apex of ditto.

-

2. Phlæothrips coriacea. " 3. Idolothrips Spectrum.

59 4. Limothrips cerealium. Propupa, ♀. a. Head. b. Tarsus. c. End of abdomen.

5. Pupa, Q. a. Hind leg. b. End of abdomen.

6. Pupa, J. a. End of abdomen. "

 Imago. a. Face. b, c. Maxillary palpus. d. Abdomen, β.
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14. Thrips vulgatissima. a, b. Head. c, d. Part of mouth. ,, e. Mandibles. f. Maxilla. g. Maxillary palpus.

## TAB. VII.

Fig. 1. Terminal segments in Limothrips cerealium, 3 (a, b). g. Rectum. e. Testes. f. Vesicula. d. Utriculus. c. Exitus.

,, 2, 3. Annulus analis cum virga recurva.

- 4. 3. a. Utriculus. b. Canalis excretionis. c. Vesiculæ. d. Testes.
- 5. Idem, a latere cum fibris suspensoriis. f. Rectum. e. Fibræ.

6. Abdomen, ♂.
7. Abdomen, ♂.
7. Thrips Urtica. 8. Apex. 9. Apex. 10. Exitus. Thrips Physapus.

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Fig. 12. Terebræ valvula, exterior. Thrips atrata.

,, 13. ,, ,, interior. ,, ,, ,, ,, ,, 14. Terebra integra. ,, ,,

- " 15. Theca ex ovariis.
- " 16. Vasa dubia gemina prope os, cum apicibus ovarii connexa, etiam in larvis obvia; in *Tubuliferis* pariter adsunt.

, 17. Ovum maturum.

,, 19. Intestinum. Thrips rufa, Q. a. Œsophagus. b. Ingluvies. c. Proventriculus. d. Duodenum. e. Intestinum tenue. f. Rectum. g. Vasa hepatica "malpighiana" dicta. h. Ductus salivæ? i. Vasa prædicta dubia.

, 20. Portio ejusdem. Thrips vulgatissima.

" 21. Insertio vasum hepaticorum. " 22. Intestinum. Sericothrips.

23. Frustum e ductu salivari (optical deception?)

" 24. Intestinum. Limothrips cerealium, larva.

" 25. Vasa dubia. " " 26. Thrips obscura. Inglu

" 28. Pagina infera.

" 29. Portio magis aucta, ut exhibeat spiraculum prothoracis, x.

" 30. Tracheæ in Thr. rufa.

" 31. Coleothrips fasciata. Head in front.

" 32. Do. behind. 33. Labium. 34. Maxillary palpus.

,, 35. Labial palpus. 36. Maxilla. 37. Labrum.

,, 38. Hemelytron, the hairs omitted. 39. Tarsus. 40. End of antenna. 41. Antenna of larva. 42. End of abdomen of larva.

,, 43. Thrips Ulicis. Antenna. ,, 44. Do. Fore tibia and tarsus.

## TAB. VIII.

Fig. 1. Medullary system of Phlaothrips Pini.

2. The position of cephalic lobes in pupa of Thrips cerealium,

with the passage of esophagus.

" 3 and 4. The lobes of cephalic ganglion and emergence of esophagus in *Phlæothrips*. c. Œsophagus. d. Recurrent salivary duct of one side. e. Ingluvies.

" 5. Optic nerve.

", 6. Intestinal canal of *Phlæothrips. a.* Head. b. Œsophagus. c. Ingluvies. d. Proventriculus. f. Duodenum. g. Intestinum tenue. h. Vasa hepatica. i. Rectum.

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- Fig. 7. Position of the rectum, with relation to the terminal segments. P. Statices.
- 8. Inflated insertion of malpighian vessels (d.) in a male of P. Statices. a. Duodenum. b. Small intestine. Rectum.
- 9, 10, 11. Reproductive system in Phlæothrips, 3. b". Testes. b'. Deferentia. c. Vesiculæ pares. d, e. Vesiculæ impares. a. Utriculus præ canali excretorio.

12. The ovaries of P. Statices, 2.

13. Unfertilized ovary in Q newly transformed P. Pini. 99

14. End of one of the egg-sheaths.

15. Full-grown egg.

16. Do. in another stage? 22

17. Mouth with a salivary receptacle? in situ. P. Pini. a. labrum. c. maxilla.

18. Excretory canal of saliva glands?

19. The saliva gland? 99

20. The pair, (see fig. 16 of plate 7). 99

21, 22. The two salivary receptacles of one side? doubtful). 99

23. Tip of haustellum, in situ. Phlæothrips.

24. End of labrum.

25. End of maxillary palpus. 99

26. The labrum and maxilla in juxtaposition. γ. Double membranous lining of labrum.

27. Labrum. 28. Labium.

22 29. Mandibles.

30. Maxilla of Idolothrips.

99 31. End of mouth, with emerging mandibles.

32. Mandible or tongue.

33. Mouth of Phlaothrips Pini, larva. "

34. Horny spots at base of do.







Z P. METCALF

